

# MODERN PACKAGING

December

1946

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DETROIT





## SHOULD THE RIGHT ADHESIVE BE?

**RELY on National ... with its interest in your individual requirements ... for an adhesive that will be flexible enough to meet all plant and field variations.**

Let's look at some individual requirements. A hard luggage adhesive should be easily handled and versatile. It should adhere vulcanized fiber to plywood ... 'draw on' leather to wood, fabric, paperboard, etc., ... bond wood molding inside sample cases ... laminate multiple plies of veneer before shaping under heat and pressure ... and offer exceptional resistance to weather and fungus. A soft luggage adhesive should leave bonded leathers and treated fabrics with an outstanding softness and pliability.

An upholstering adhesive should provide adequate

tack and speed for hand adhering cloth to cloth, chip-board, wood, wadding, etc. It should be free from residual odor and any tendency to penetrate and stain light fabrics.

A labeling and overcoating adhesive should bond to wood, fiber, painted steel, tin and glass. It should be weather-proof, vermin-proof, age-proof.

It doesn't matter whether your adhesive problem is a run-of-the-mill packaging, converting, assembling job or a brand new postwar problem. National is interested in creating an adhesive formula that will meet your individual requirements ... provide sufficient flexibility for material and commercial variations ... withstand all extremes of shipping and consumer uses. Your inquiry is invited — NOW!

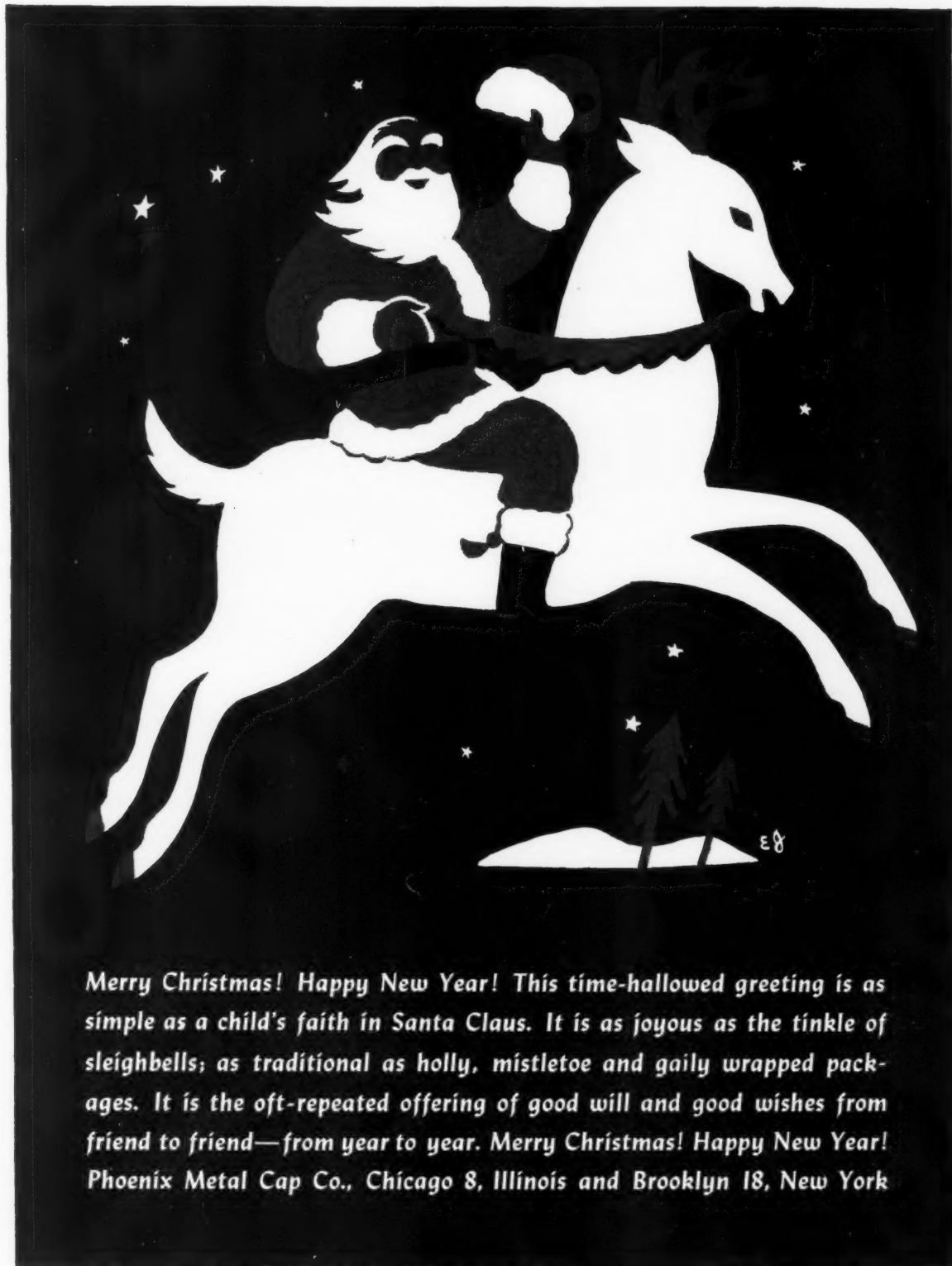
• Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

**National**  
ADHESIVES

 Dunellen Plant

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE





Merry Christmas! Happy New Year! This time-hallowed greeting is as simple as a child's faith in Santa Claus. It is as joyous as the tinkle of sleighbells; as traditional as holly, mistletoe and gaily wrapped packages. It is the oft-repeated offering of good will and good wishes from friend to friend—from year to year. Merry Christmas! Happy New Year! Phoenix Metal Cap Co., Chicago 8, Illinois and Brooklyn 18, New York

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# MODERN PACKAGING

VOLUME 20

DECEMBER 1946

NUMBER 4

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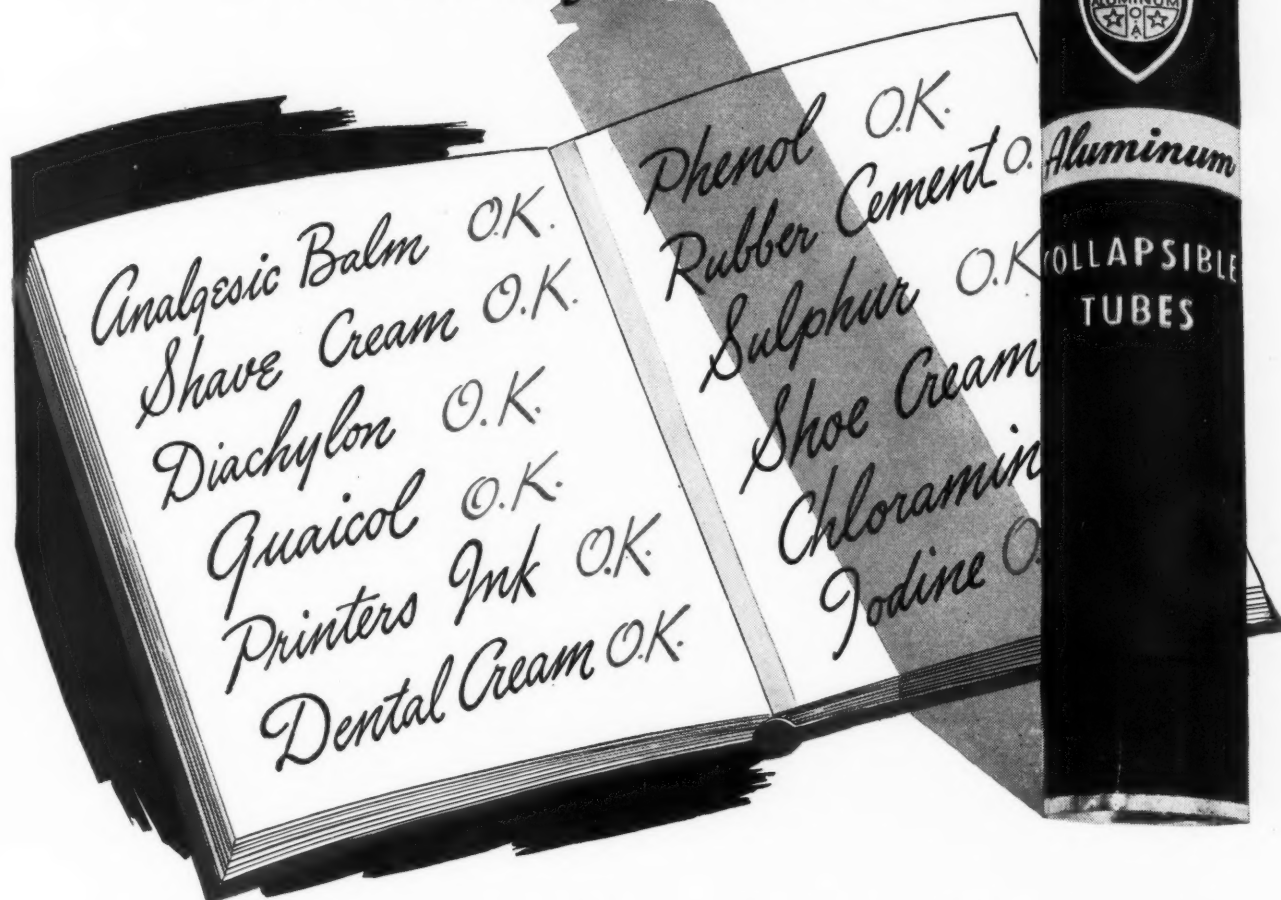
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COVER—Christmas design by Peter Piening

*Many of the answers  
are already in our book*



Just about everything from mascara to anchovy paste can be safely packed in Alcoa Aluminum Tubes. Yet we still insist on testing *your* mascara or *your* anchovy paste in our tubes before we say "OK!"

At the Alcoa Packaging Laboratory, tests are made with your products to determine whether you can safely use *plain* Alcoa Aluminum Tubes, or whether you ought to use *inside-coated* tubes. And we'll tell you which of the score of coating materials will work best with your product. It takes only 90 days to get the complete data on these tests, made under the severest accelerated conditions of humidity, temperature, and use.

Alcoa Aluminum Tubes are strong to take a lot of squeezing and bending. They are light in weight, economical to ship. And they can be handsomely decorated in sharp, sparkling designs and colors of your choice.

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*Another Good Thought*

PASSED ALONG . . .



MAKERS OF

## FOOD PROTECTION PAPERS



GENUINE VEGETABLE PARCHMENT  
SPECIAL TREATED . .  
GREASEPROOF . .  
WAXED . .

**KALAMAZOO VEGETABLE  
PARCHMENT COMPANY**

. . .

PARCHMENT . KALAMAZOO 99 . MICH.

BRANCH PLANTS IN HOUSTON, TEXAS  
AND PHILADELPHIA, PENNSYLVANIA

"THE WORLD'S MODEL PAPER MILL"



Traffic paint protectors designed, patented and manufactured by Plastic Engineering, Inc.

## Now they're making highway markers from GEON

### *Another interesting application for GEON raw materials*

**T**HOSE highway markers—more properly known as “traffic paint protectors”—are lightweight, easy to handle. They’re permanently colored, unaffected by sun, rain, air, heat, cold, paint, oil, or any one of hundreds of normally destructive factors. They’re sufficiently resilient that they won’t break when dropped from truck to painted line. Nor will they harm a tire if accidentally struck by a car. It was possible to mold them from one of the GEON polyvinyl materials in such a way that they stack easily, yet always land in the right position when dropped from the paint truck.

These properties, plus many others,

have made versatile GEON the ideal material for literally hundreds of products in the home and in industry—shower curtains and fly swatters—upholstery and floor tiles—clothing and luggage—wire insulation and acid tank linings.

And GEON can be pressure or injection molded, extruded, calendered or cast into sheet or film. In solution or latex forms it can be applied as coatings for fabrics and fibres of all kinds as well as for paper and cardboard. Products made from GEON may be flexible or rigid, clear or opaque, brilliantly or delicately colored.

For more information about GEON, please write Dept. L-12, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.



# B. F. Goodrich Chemical Company

A DIVISION OF  
THE B. F. GOODRICH COMPANY

DECEMBER • 1946

7



Artist—Jacob Lawrence, native of New Jersey

**NEW JERSEY**—annual purchases: \$3 billion—mostly packaged.

**CONTAINER CORPORATION OF AMERICA**



Save Waste Paper





**USE THE CLOSURE  
COMBINATION THAT**

**SAVES LABOR OF TWO PERSONS**

*SilverStitch*  *SilverStitchers*

BOX STITCHING WIRE

- One-piece, continuous length, 5 and 10 pound coils . . . cuts threading time
- Galvanized to resist rust, corrosion
- Always uniform in width and gauge
- Makes stronger, surer closures than other methods . . . unaffected by weather

BOX STITCHING MACHINES

- Few moving parts . . . vital ones reversible . . . for lower maintenance costs
- Adjustable, single pedal control
- Operate easily, smoothly, quietly
- Heavy duty construction . . . low power consumption . . . for long thrifty service

Sealing Shipping Containers by Stitching is Faster, Stronger and More Economical

**ACME STEEL COMPANY**

NEW YORK 7

ATLANTA

CHICAGO 8

LOS ANGELES 11

*a welcome beach accessory*



*style-conscious packages*

*for sun-tan lotions*



We have devoted 57 years to supplying packagers  
with glass containers made to the most exacting standards. Perhaps  
that is why so many quality minded buyers of commercial glass  
continue to specify Carr-Lowrey.

**CARR-LOWREY  
GLASS CO.**

Factory and Main Office: BALTIMORE 3, MD. • New York Office: 500 FIFTH AVENUE (18) • Chicago Office: 1502 MERCHANDISE MART (54)

OPAL JARS • HANDMADE GLASS BOTTLES • MACHINE MADE FLINT GLASS BOTTLES

*For products that justify the finest in glass containers*

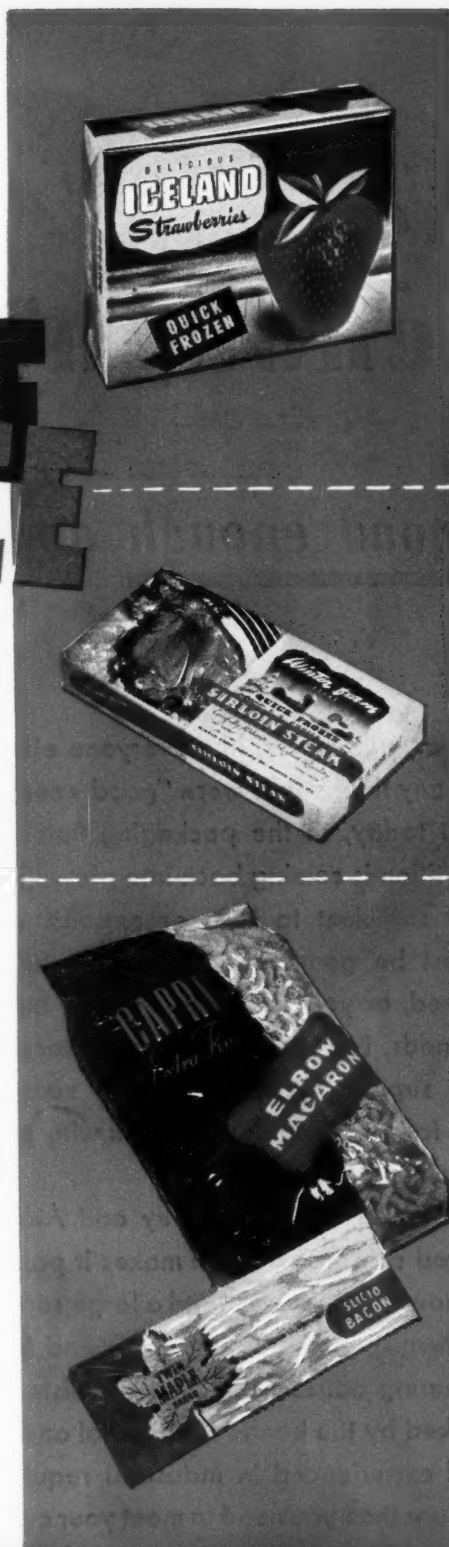
the kind  
you look  
at

**TWICE  
TWICE**

Whether it's packages or people—eye appeal is the natural result of careful attention to detail . . .  
... In Packages by Milprint design, material, color, and brand identity are all blended by experts into an outstanding, finished package—created to increase your sales by compelling EXTRA attention to your product.

Why not DOUBLE the shelf-appeal of YOUR package?  
Consult Milprint today!

packages  
by  
milprint



**MILPRINT Inc.**

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

plants at Milwaukee, Philadelphia, Los Angeles,  
San Francisco and Tucson

SALES OFFICES IN ALL PRINCIPAL CITIES

PACKAGING  
HEADQUARTERS  
TO  
AMERICAN  
INDUSTRY



# "good enough"

## Isn't good enough any more

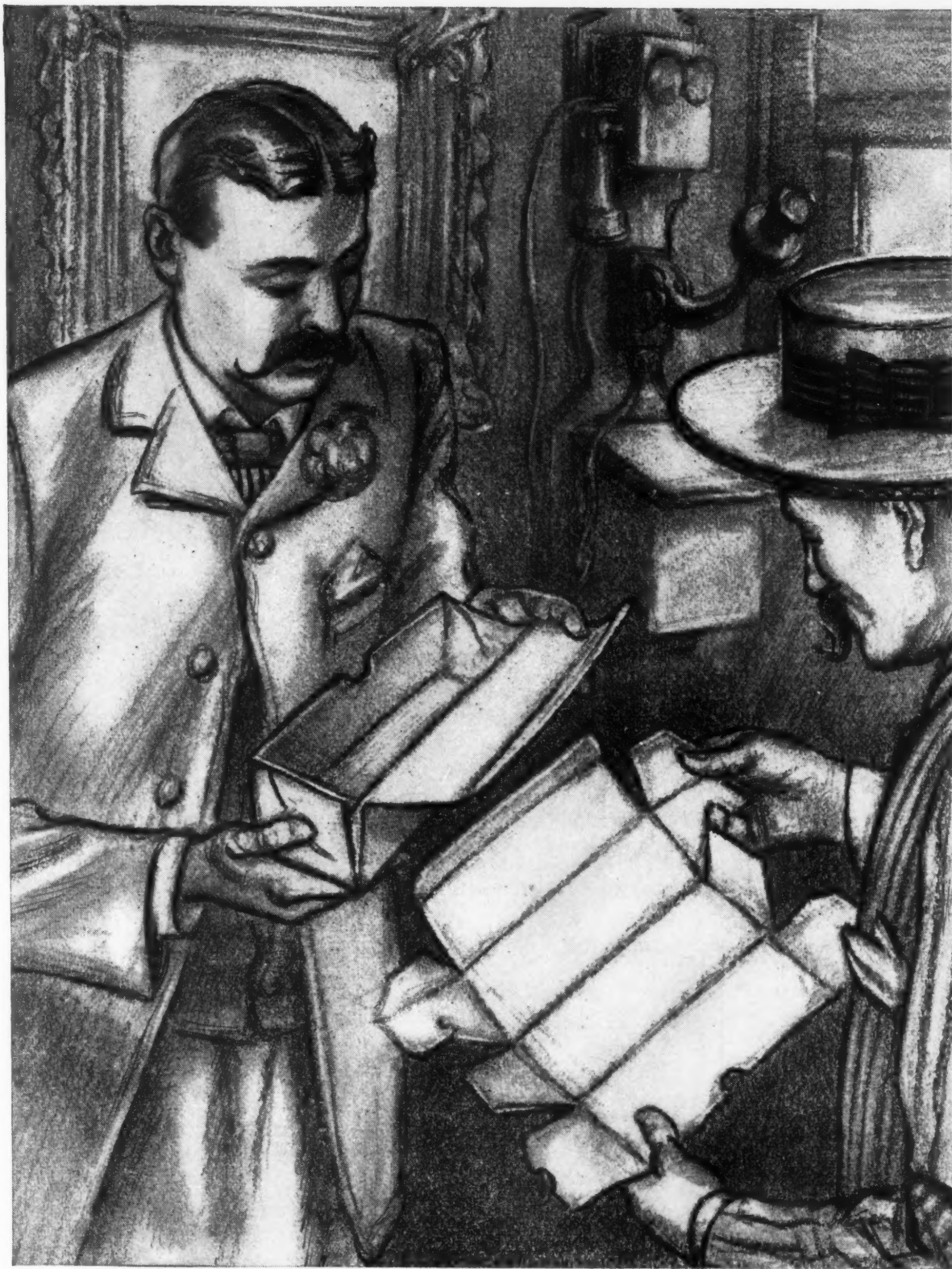
**D**uring the war, packagers, like everyone else, had to put up with many things that were "good enough", and no better. But today, in the packaging field as in all others, competition is coming back into play, and "good enough" isn't sufficient to hold or expand a market. Laminants must be good — better than before — constantly improved, or your products will fall behind the market's demands. But to keep up the research necessary to make superior laminants would mean taking your chemists from their important work with papers to concentrate on a side-line.

There's an answer to this — Dewey and Almy's program of "related research", which makes it possible for converters to have at their command a large supplementary staff of chemists to work out details and to supply superior laminating adhesives. These chemists, sharing knowledge linked by the bonds of colloidal and organic chemistry, and experienced in industrial requirements, can give you more than you need to meet your customers' demands. Why not get ahead of competition now, and stay ahead, with laminants that are not "good enough", but the best?

## **Darex** *Laminating* **Adhesives**

A Product of

**DEWEY AND ALMY CHEMICAL COMPANY**  
CAMBRIDGE 40, MASSACHUSETTS ★



## ENTER THE FOLDING CARTON—AND PROSPERITY

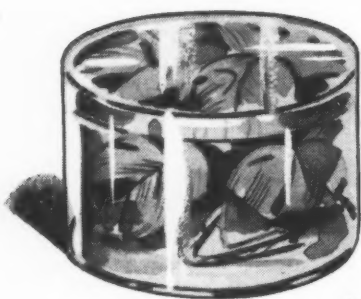
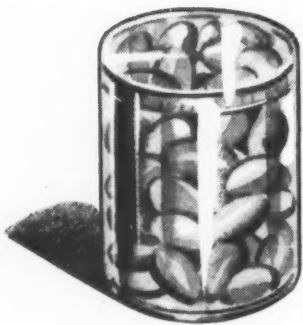
The advent and rapidly spreading use of the folding carton had far-reaching effects not only on packaging and merchandising methods but also on the living standards of the American consumer. Folding cartons banished the unsanitary cracker barrel. They made selling and shopping far easier, promoted brand identification and reduced waste. Distribution costs were cut, healthy competition stimulated, bringing

rich dividends to both producer and consumer. Since 1896 when the first soda cracker was sold in an ingeniously constructed collapsible box, the folding carton has contributed much to raising the American standard of living to its high peak.

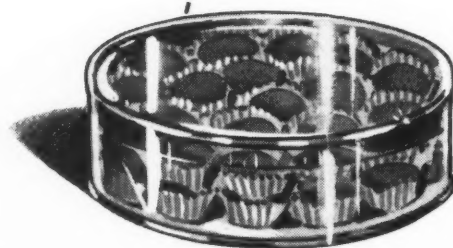
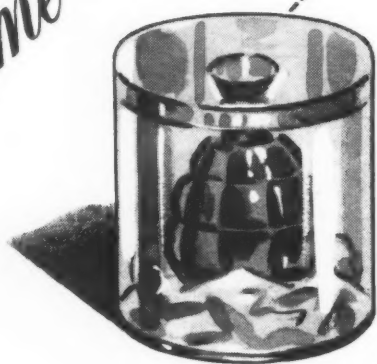
**UNITED PAPERBOARD COMPANY, INC.**  
PAPERBOARD FOLDING CARTONS  
285 MADISON AVENUE NEW YORK 17, N. Y.



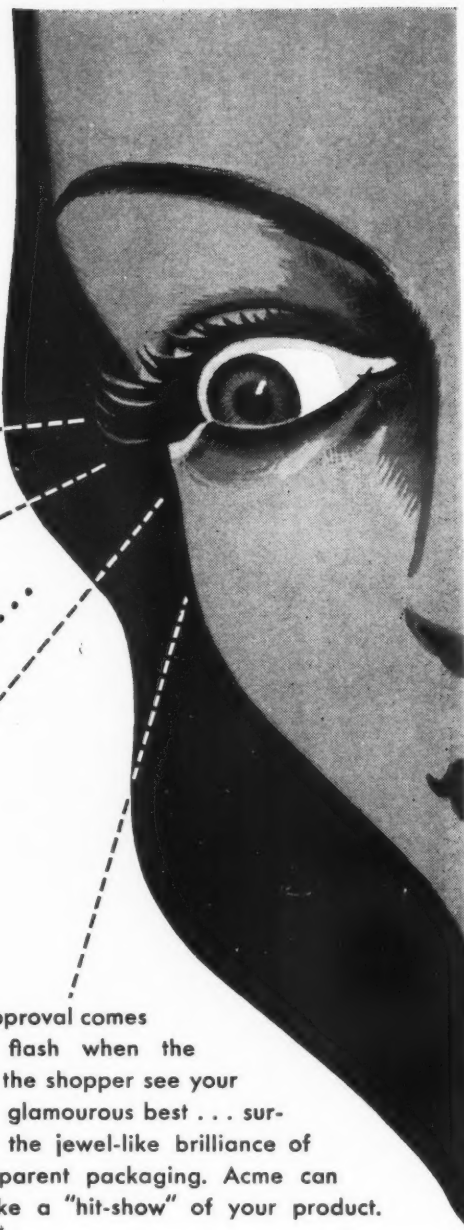
AN "AYE" FOR AN EYE! . . .



*Acme creates the ideas in acetate...*



Enthusiastic approval comes quick as a flash when the keen eyes of the shopper see your product at its glamorous best . . . surrounded with the jewel-like brilliance of acetate transparent packaging. Acme can help you make a "hit-show" of your product.



## ACME PAPER BOX COMPANY

STATE AT SIXTIETH ST., CHICAGO 21, ILL.  
DESIGNERS • CREATORS • MANUFACTURERS

- INTRIGUING SET-UP BOXES
- SPECIALIZED PACKAGING
- UNUSUAL MERCHANDISE COUNTER DISPLAYS
- CREATIVE FOLDING CARTONS

THE BETTER THE PRODUCT THE MORE IMPORTANT THE PACKAGE



# Now Oranges Keep *Tree-Fresh* for Weeks

in this  
new de luxe  
gift pack



**F**OR the first time people everywhere can soon enjoy naturally ripened, tree-fresh oranges and grapefruit—thanks to **Pliofilm**—in this new gift pack. Great golden globes of sweetness picked when the sun has bulged their skins with juice, each fruit individually sealed in a gleaming “second skin” of transparent, air-vapor-moisture-proof **Pliofilm**.

Such de luxe juicy-ripe fruit could not be shipped without the magic protection of **Pliofilm**. Because it is truly moistureproof and liquid-tight, **Pliofilm** prevents dehydration (juice loss) that heretofore has made it necessary to ship most perishable fruits and vegetables green or unripe.

Extensive tests by the University of Florida Agricultural Experiment Station prove that fully ripe oranges

sealed in **Pliofilm** will keep in perfect condition for weeks with only negligible loss in juice-weight; without any deterioration in looks and quality. They taste like fruit just plucked from the tree!

## Keeps moisture in—or out!

**Pliofilm** offers the same incomparable protection to all perishables—fruits, vegetables, fish, oysters, shrimp, meats and other foods. Makes it possible to ship farther; insures arrival in top condition and better sale price. And it is equally effective in preventing moisture absorption by hygroscopic drugs and chemicals. If you have a packaging problem involving moisture, better investigate **Pliofilm**. Write: Goodyear, Chemical Products Division, Pliofilm Dept., Akron 16, Ohio.

*Want to see proof?*



Both these oranges were identical in weight when picked. After three weeks at room temperature the orange sealed in **Pliofilm** (left) lost only 1.7% in weight, showed no change in color or any deterioration. The unprotected orange (right) lost 20% in weight; its skin turned dark and leathery and rot was evident.

# Pliofilm

A PRODUCT  
OF GOODYEAR  
RESEARCH



*Pliofilm*—T.M. The Goodyear Tire & Rubber Company

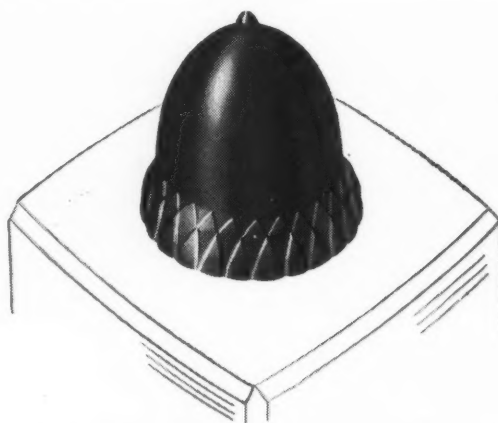
# Ideas for individualizing your private mold caps



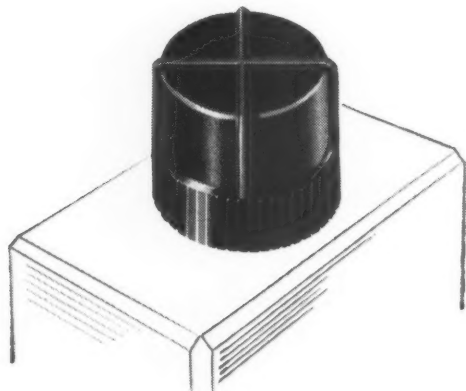
**YOUR NAME** is the center of attraction on this distinctive Artmold Cap. Filled in with color and surrounded by a decorative "bulls-eye" pattern, your name gets and holds customers' attention.



**DIGNITY AND BEAUTY** are the keynotes of this highly individualized cameo-design Artmold Cap. Designs like this help make more sales for "luxury trade" items, attract discriminating buyers.



**SYMMETRICAL ACORN** is one of a wide variety of individualized designs available on Artmold Caps. Lend sales-building dignity and eye appeal to your package with your own personal design.



**THE STYLE** of your cap can accentuate the lines of your container. An Artmold Cap can make it look taller, shorter, modern, "period," and otherwise add to the appearance and salability of your package.

**THE EXTRA STYLE**, beauty, and distinction of an Armstrong's Molded Cap will give your packages an "edge" in the competitive selling days just ahead. Get design suggestions now. Send a sample or drawing of your package to Armstrong Cork Co., Glass and Closure Division, 5912 Prince Street, Lancaster, Pa.



**ARMSTRONG'S**  
*Artmold*  
PLASTIC **CAPS**

# STERILIZED and kept sterile in METALAM

Sealed in Metalam\* packages after being subjected to prolonged sterilization, FOILLE-FLAT dressings made by Carbisulphoil Company, Dallas, Texas, permanently retain their sterile qualities. The air-tight, moisture-proof lamination of aluminum foil and film provides this essential, long-time protection. Yet the package can be opened quickly, and the FOILLE-FLATS made conveniently available for effective medication of burns and other wounds, in physicians' offices, hospitals and first-aid stations.



"FOILLE-FLATS"... the first  
sterile, medicated bandage

For any product, Metalam maintains a permanent blockade against attacks on flavor and quality. It's flexible, light, and adaptable for high-speed packaging on modern automatic machines. The transparent film forms a perfect surface for attractive multicolor printing.

When you package in Metalam, you get complete protection plus effective sales appeal. Ask us for practical suggestions and a copy of the new Metalam "how-to-do-it" booklet.

THE DOBECKMUN COMPANY, Cleveland 1, Ohio

\*Reg. U. S. Pat. Off.

## DOBECKMUN

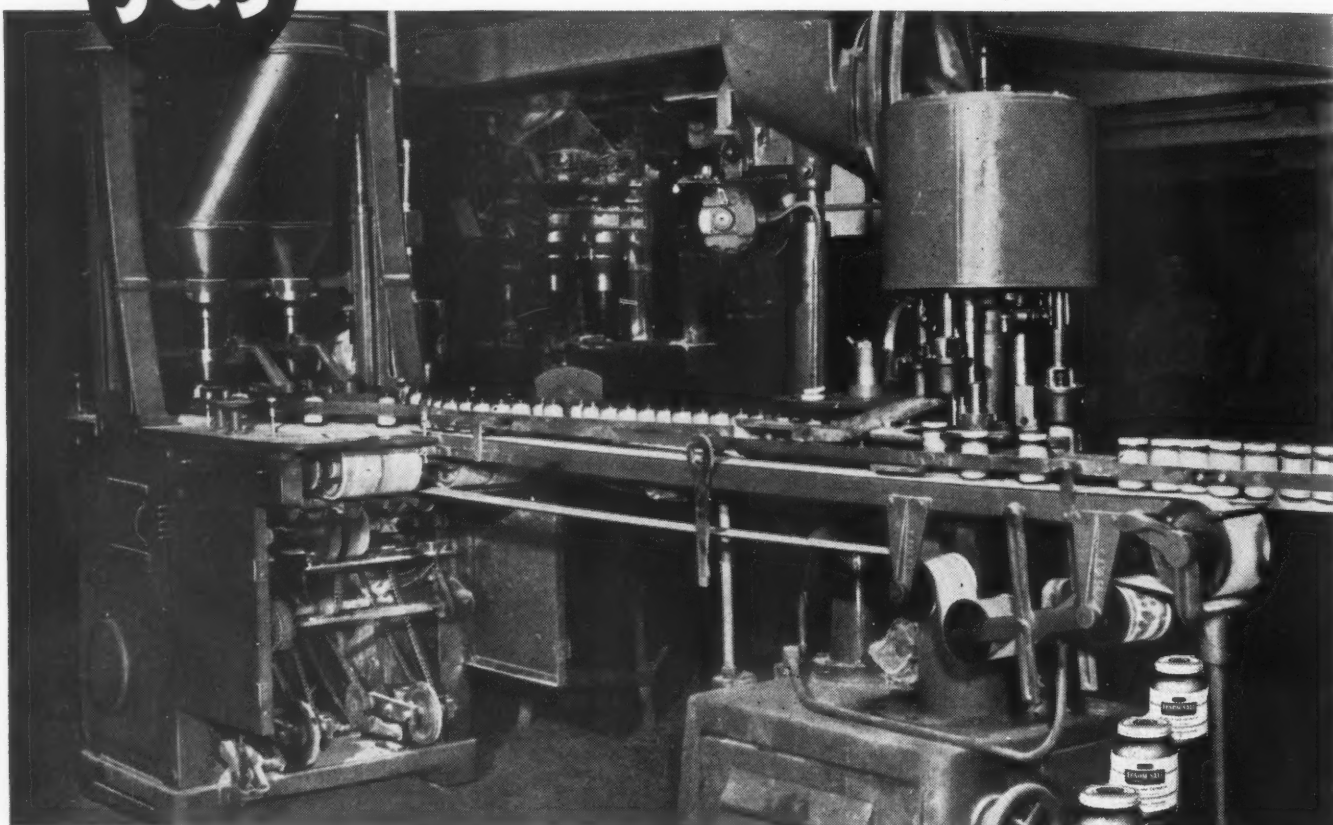
➔ Self-selling packages in processed films and foils ➔

Branches in Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

DECEMBER • 1946

17





The S & S HG-84 Duplex Heavy Duty Filling Machine answers their problems. Three sizes of jars are filled on one machine and fed into the automatic capping unit at the rate of about 60-72 per minute. While filling with speed and accuracy the HG-84 vibrates to insure complete fill.

The HG-84 can also be supplied with "Auger-Vac"—the auger-vacuum system for dustless fill and tight pack—is available in various types. It fills not only jars, but cans or other air-tight containers with pulverized coffee, powdered milk, ice cream mix, malted milk, cocoa or numerous similar products, in the amounts desired. Full particulars on request.



# STOKES & SMITH CO

FRANKFORD, PHILADELPHIA 24, U.S.A.

FILLING • PACKAGING • WRAPPING MACHINES

SPEEDS TO SUIT YOUR NEEDS 15—30—60—120 PER MINUTE

**"Better machines for better packages"**

... in a gilded cage



In this interesting new Shaw-Randall package the colognes of Helena Rubinstein claim the place of honor in milady's boudoir . . . Shaw-Randall imagination and practical experience can give good products a better chance to get ahead. Why not let us apply the approved principle of visible packaging to your product?

Note: The round cardboard base of the container illustrated is fabricated by Hemenway Corp., Waterbury, Conn.

## SHAW-RANDALL CO.

DESIGNERS and CREATORS of VISIBLE PACKAGES

PAWTUCKET • RHODE ISLAND

A DIVISION OF SHAW PAPER BOX COMPANY

SALES REPRESENTATIVES

Fred Mann & Co., New York

H. B. W. Snelling, Boston

L. T. Swallow & Associates, Detroit

# Fitting the Container to the Product

SIZE IS Basic—

But if protection,  
color and visibility  
are factors,  
there is no container  
quite so satisfactory; so rugged,  
attractive and economical as



**Clearsite\***

\* Reg. U. S. Pat. Off.

**SHATTERPROOF  
SEAMLESS  
FEATHERLITE**  
imprinted during  
manufacturing process

PACKAGE DESIGN EXPERTS  
ARE AT YOUR SERVICE

## EXTRUSION & INJECTION

*The Mechanics are Simple...*



We have a good deal more to offer than our high grade machines which produce top-quality Thermo-plastics. To these we've added many important little improvements. Those who have us do their moldings like our ability to solve out-of-the-ordinary plastic problems. Perhaps you would, also!

**FLEXIBLE OR RIGID RODS—TUBING—  
BELTING—STRIP and SPECIAL SHAPES  
by EXTRUSION**

WEST COAST REPR.: Container Service Co., Los Angeles 27, Cal  
CANADIAN REPR.: Plastic Supply Co., Montreal 2, Quebec  
MEXICAN REPR.: Manuel Leon Ortega, 218, Mexico D.F.  
SO. & CENT. AMERICAN REPR.: C. Civita & Co., 2 W. 45th St., N. Y. City

Simple or intricate products or parts  
up to 22 oz. per shot by INJECTION.



**CELLUPLASTIC CORPORATION**

PLASTIC CONTAINERS

AND

PLASTIC PRODUCTS

50 AVENUE L

NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE





*Boughs,  
Bows,  
Boxes and Champion Kromekote*

THE CHAMPION PAPER AND FIBRE COMPANY... HAMILTON, OHIO

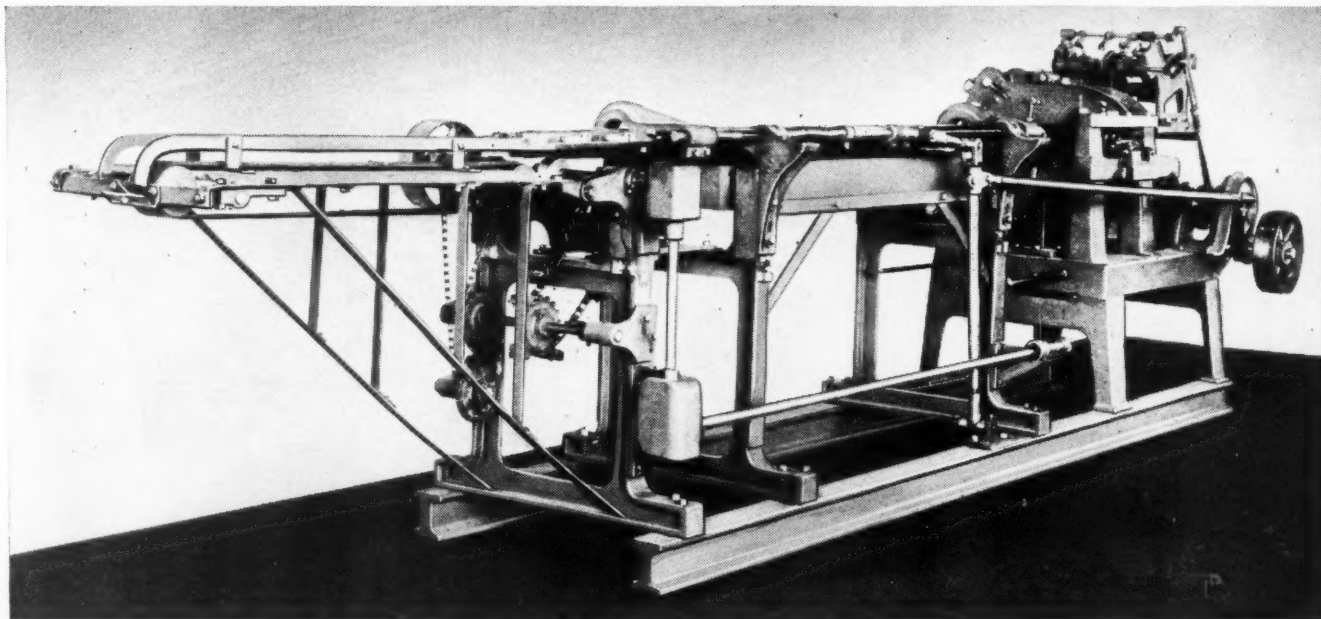
District Sales Offices: NEW YORK • CHICAGO  
PHILADELPHIA



DETROIT • ST. LOUIS • CINCINNATI • ATLANTA • SAN FRANCISCO



# YOU'RE FASTER...WE'RE FASTER!

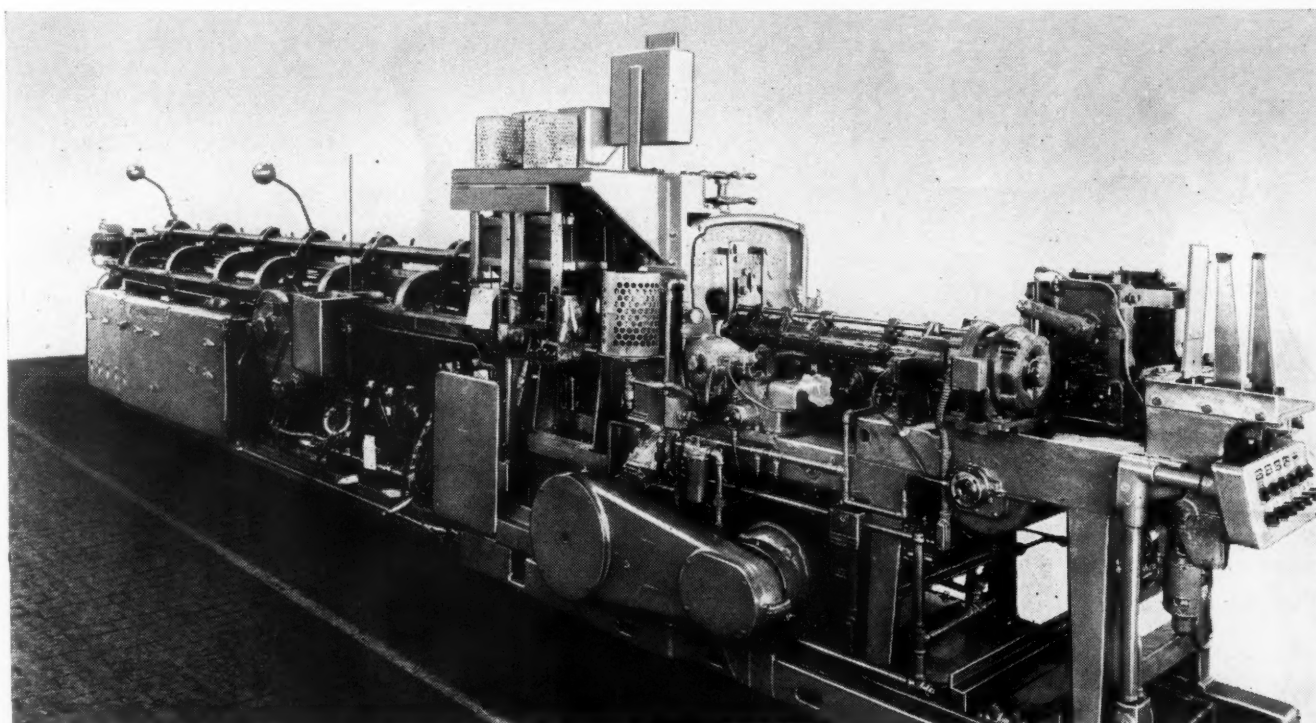


In 1904, this old-type can-making machine was a nine days' wonder . . . the last word in container production.

Geared to the nation's modest industrial requirements of that day (less than \$42,000,000 worth of cans), it

produced 75 containers a minute.

Nothing sensational by today's standards, but it did the job of supplying American industry with a round, metal package in limited quantity.



Today it's another story . . . *packaging* is a *must*—and the day of the open cracker barrel is almost a forgotten memory.

*Packaging companies have accepted the challenge!* (More than \$400,000,000 worth of metal containers in 1945.) . . . Modern machines like this speed out 400 containers a minute. But more important . . . modern containers of all

kinds MEET EXACT SPECIFICATIONS.

Now, consumer goods appear in metal and fiber packages in a multitude of sizes.

This year . . . as never before . . . the container-making industry is striving to supply the unprecedented demands of package-conscious America.

AMERICAN CAN COMPANY • NEW YORK • CHICAGO • SAN FRANCISCO



No other container protects like the can



# The packaging that attracts...



And time has proven the sure-fire attraction of ACE Cartons. For back of these creations that help sell the nation's leading products, is inspired craftsmanship and a practical planning that goes beyond mere protection. It will be to your advantage to go over your packaging problems with our design engineers.



**ACE CARTON CORPORATION**

5800 West 51st Street, Chicago 38, Illinois

FOLDING PAPER CARTONS • FOLDING DISPLAYS • DISPLAY CONTAINERS

**A PERMANENT  
NEW PART OF  
THE HOUSEHOLD  
PICTURE...**



**UTILITARIAN...DECORATIVE**

## **WET-STRENGTH PAPERS**

*made with*

# **PAREZ\*\* RESIN 607**

✓  
• DRAPERIES  
• WINDOW SHADES  
• TABLE CLOTHS  
AND NAPKINS  
• WALL PAPER  
• PAPER TOWELS

*A* GREAT many household items are now being made of paper because of the advantage of wet strength imparted to paper by PAREZ Resin 607.

Durable wet-strength paper tablecloths and napkins...disposable sheets and pillow cases...towels...handkerchiefs...window shades and drapes...these are only a few of the interesting possibilities in a new market being opened to paper manufacturers with wet-strength paper. For PAREZ Resin 607 provides not only high wet strength, but increased dry strength and fold endurance. Papers remain strong and difficult to tear even when soaking wet.

They can also be handled many times without damage. Such qualities suggest many new uses for paper in the home, both as decorative and utilitarian items.

Improved wet and dry strength can be imparted to any type of paper from paperboard to fine tissue by PAREZ Resin 607. It is added during the regular paper manufacturing process efficiently and easily through use of Cyanamid's own procedure. Our technical service representatives will be glad to work with you.

*WHEN PERFORMANCE COUNTS...CALL ON CYANAMID*

**AMERICAN Cyanamid COMPANY**

*Industrial Chemicals Division*

**30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.**

DISTRICT OFFICES: Boston, Mass.; Philadelphia, Pa.; Baltimore, Md.; Charlotte, N. C.; Cleveland, Ohio; Chicago, Ill.; Kalamazoo, Mich.; Detroit, Mich.; St. Louis, Mo.; Azusa, Calif.; Seattle, Wash. In Canada: Dillons Chemical Company, Ltd., Montreal and Toronto.

\*\*Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.





**High on** "P







# "Eye-Catching" quality...

**CARTONS OF COATED LITHWITE\***



This revolutionary clay-coated paperboard, plus Gardner-Richardson carton craftsmanship, means stand-out packages on the shelf

SOMETHING happened seven years ago when Gardner-Richardson introduced *Coated Lithwite*. For the first time clay-coated paperboard became a *packaging possibility for mass merchandisers*. Why? *Coated Lithwite* was the first *clay-coated* paperboard ever made in *one* straight-through operation. Since then, billions of cartons of *Coated Lithwite* have whisked across the nation's shelves — *smart, colorful cartons produced in Gardner-Richardson's exacting plants*.

Why does *Coated Lithwite* add *quality*-appeal to your package? Because this finer board has a satin-smooth *chalkless* surface that's free from "hills and valleys." Takes plate impressions uniformly. Holds up inks with vivid brilliance. *Coated Lithwite* is rub-resisting, fade-resisting—easier to glue. And, when combined with Gardner-Richardson's carton craftsmanship, it produces packages that really *sing* on a shelf!

If you are a mass-producer of packaged goods, it will pay you to investigate the possibilities of *Coated Lithwite* against the day when Gardner-Richardson can book additional business.

**More eyes reach for your product in**

## **Cartons of Coated Lithwite**

**The GARDNER-RICHARDSON Co.,** Manufacturers of Folding Cartons and Boxboard, Middletown, O.

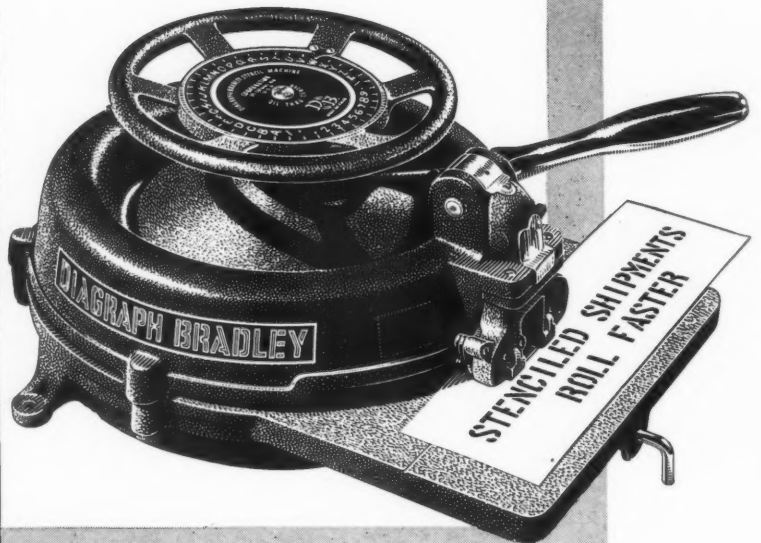
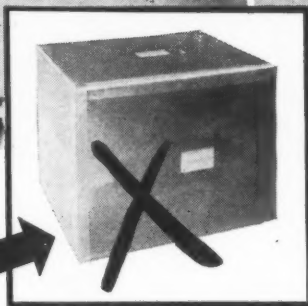
\*Reg.U.S.Pat.Off. Sales representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis.

# PREFERRED



Stencil Marked  
for Prompt  
Identification.

Illegible addressing  
causes delays  
and lost shipments.



Do your shipments receive preferred  
handling in transit to your customers?  
Stencil addressed shipments get preferred  
handling...

*Stencil  
Shipments  
Roll Faster!*

## Why?

Common carriers recommend stencil addressing. Stencil addressed shipments are clear-easily read-permanently marked-and eliminate illegibility-labels coming off-speeds delivery-due to prompt identification in transit.

Stencil addressed shipments keep your packages out of the carriers' Lost Shipment Warehouse.

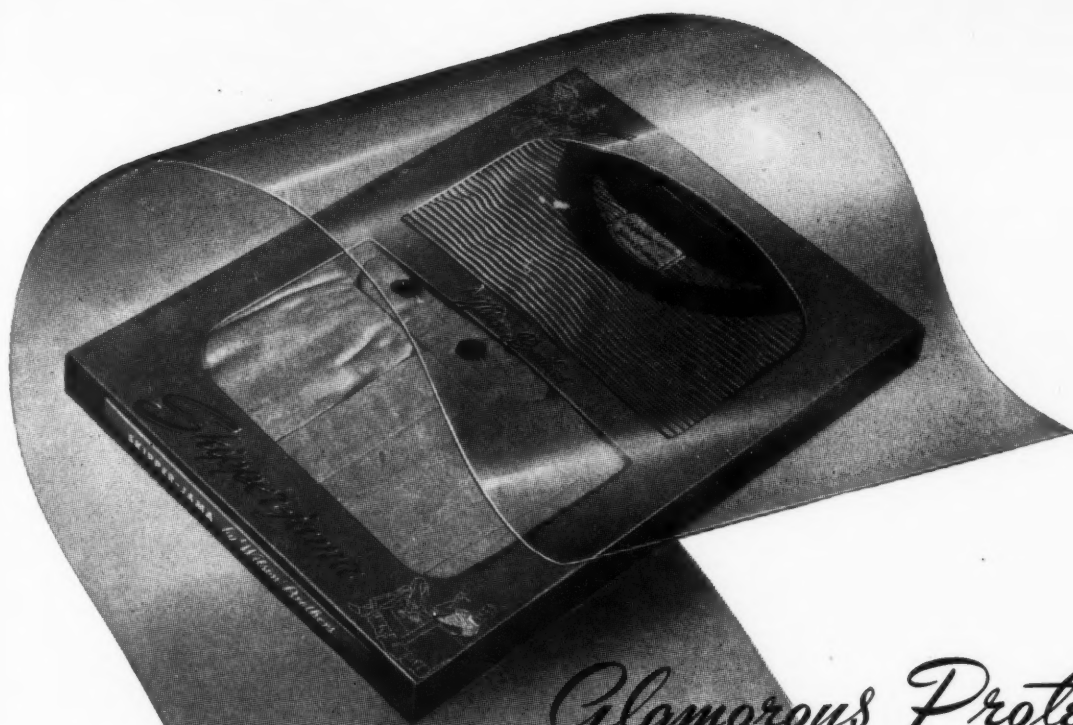
**DIAGRAPH-BRADLEY**  
STENCIL MACHINE CORPORATION  
ST. LOUIS 8, MISSOURI

DISTRIBUTORS IN PRINCIPAL CITIES-SEE CLASSIFIED  
SECTION-TELEPHONE DIRECTORY-STENCIL CUTTING MACHINES

**D.B.**  
REG. U. S. PAT. OFF.

THE WORLD'S OLDEST AND  
LARGEST MANUFACTURER OF  
STENCIL CUTTING MACHINES

Complete Shipping Room Supplies



*Glamorous Protection*  
FOR THE PRODUCT

*... Final Persuasion*  
TO THE EYE

Your LAMCOTE package will be  
soil-resistant, fresh, appealing  
and sturdy through a long life.

See what LAMCOTE  
will do for *your* package.  
Write for details of this proc-  
ess and samples of LAMCOTE.  
Send us your package or any print-  
ed piece and we will promptly  
return it to you . . . LAMCOTED  
. . . for your personal observation.



*Reflects the Quality of Quality Products*

**ARVEY CORPORATION**

3460 N. Kimball Avenue, Chicago, 18, Illinois  
303 Communipaw Ave., Jersey City 4, N. J.





**Buyer**

**"scouting" for a better  
steel container**

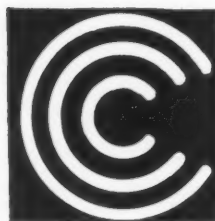
If your product is liquid, solid or semi-solid, there's a Continental steel container to package it. For Continental makes steel pails and drums in a wide range of sizes and types for virtually every industry.

For some time now we haven't been able to make enough containers to go around. But we have stuck to our policy, "the best in *quality*, the best in *service*." So when you plan ahead, think of Continental's Triple-C trademark and nationwide service facilities.



**A COMPLETE  
LINE OF STEEL  
SHIPPING  
CONTAINERS**

**The Triple-C means  
best in quality, service**



**CONTINENTAL CAN COMPANY**

100 East 42nd Street, New York 17, N. Y.

teen agers' smiles  
back their favorite...



## COLGATE DENTAL CREAM IN **WIRZ** TUBES

Teen Agers are a knowing lot. Seventy-six percent of them prefer tooth paste and 45 percent prefer Colgate's, more than double the next two brands. Congratulations to this national favorite and **WIRZ** customer of long standing. The figures come from the recent study made by Market Research Company of America of 3,000 readers of

**HIT PARADER** — song-lyric magazine of over a million copies a month. More often than not you'll find the Nation's favorites in **WIRZ** Tubes. Their convenience, protection and added appeal make them ideal containers.

We suggest you put **WIRZ** Collapsible Metal Tubes in your packaging plans.



**Fourth & Cole Sts. • CHESTER, PA.**  
Export Division — 751 Drexel Bldg., Philadelphia 6, Pennsylvania

New York 17, N. Y.  
50 E. 42nd St.

Chicago 4, Ill.  
80 E. Jackson Blvd.

Memphis 2, Tenn.  
Wurzburg Bros.

Havana Cuba  
Roberto Ortiz Planos

A. G. Spilker  
Los Angeles 14, Calif. 1709 W. 8th St.  
Exposition 0170 — Also Danville, Calif.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression Molding

## A Blind Horse Was Bought in '69



THE FOUNDER . . . HENRY HEIDE

... and Henry Heide started his climb to candy fame

**B**ACK in 1869, Henry Heide decided to make the change from a candy jobber to a candy manufacturer. He rented a basement and bought a horse for his deliveries . . . a horse that turned out to be blind and constantly bumped into elevated pillars . . . but Henry Heide had the ability to overcome obstacles.

At that time, low-cost candies were sometimes questionable, and Heide's promise and faithful delivery of "quality candies" made a hit with America's sweet tooth. Today, a great variety of candies bear the famous Heide trade-mark . . . a growth largely achieved in the lifetime of its energetic founder.

The history of Heide is an example of both individual and company initiative . . . of the business progress and growth that has helped to make America great.



### HOW HEIDE USES RIEDEL FUNCTIONAL PAPERS

Riegel's Wet-Waxed Sulphite has long been used by Henry Heide, Inc.

as a die-cut, machine-formed liner for bulk candy boxes, and Riegel experts have worked constantly to produce improved methods of candy packaging. This was particularly important during the war when Heide devoted a large part of its production to special types of emergency rations.

# Riegel Papers

FOR FUNCTIONAL PACKAGING

RIEDEL PAPER CORPORATION • 342 MADISON AVE. • NEW YORK 17, N. Y.



***Kum-Kleen* self-adhesive labels  
slash small labeling costs . . .**



**not this**   
THE OLD-FASHIONED WAY

**but this** ➡  
THE MODERN KUM-KLEEN WAY



Split-second application of small brand labels is now possible with these amazing Kum-Kleen Labels. Automatic dispenser box pops them out, a finger-tip pressure instantly applies them *without moistening*. That's all there is to it. No wonder Kum-Kleen Labels carry the brand names of thousands of America's greatest manufacturing concerns. No wonder, too, that they cut labeling time two-thirds, slash labeling costs.

Unaffected by heat, cold or humidity, Kum-Kleen Labels *stay* stuck indefinitely. Unlike old-fashioned water gum labels, they are equally effective on any smooth surface, including cellophane, plastic, wood, glass, metal and varnished cardboard.

Kum-Kleen Labels may be ordered any size or shape, any color, on any stock, including cellophane, with any printed

matter. We supply you according to *your specifications*.

### AUTOMATIC DISPENSER BOX

Kum-Kleen Labels are provided in this handy automatic dispenser box. Simply pull carrying tape and label pops out ready for immediate application. *Write Dept. MP-12.*

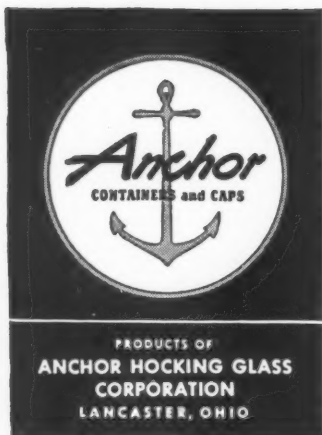
# Kum-Kleen

**AVERY ADHESIVES LABEL CORP., 36 W. Union St., Pasadena 1, Calif.; 41 Park Row, New York 7; 608 S. Dearborn St., Chicago 5, and principal cities. In Canada: Enterprise Sales, Toronto.**

ANCHOR HOCKING PRESENTS . . .



## "Crime Photographer"



. . . an exciting radio mystery show. "Crime Photographer" dramatizes the fictional adventures of Casey, ace cameraman, who covers the city, out-thinking and out-smarting the cleverest criminals. Each Thursday evening over a complete CBS coast-to-coast network, Anchor Hocking and its more than 10,000 employees present these dramatic stories of one of radio's most popular sleuths.

Week after week many new listeners

are added to the group of avid mystery fans who regularly tune in "Crime Photographer". And these millions of listeners are being told of the many advantages and conveniences of buying glass-packed products of every description.

For increased radio enjoyment, listen to "Crime Photographer"—for increased sales, specify Anchor-glass containers sealed with Anchor Caps.

# Let **PACKOMATIC** SPEED YOUR WARES TO MARKET

- AUTOMATIC
- SIMPLE
- CONVERTIBLE
- ECONOMICAL

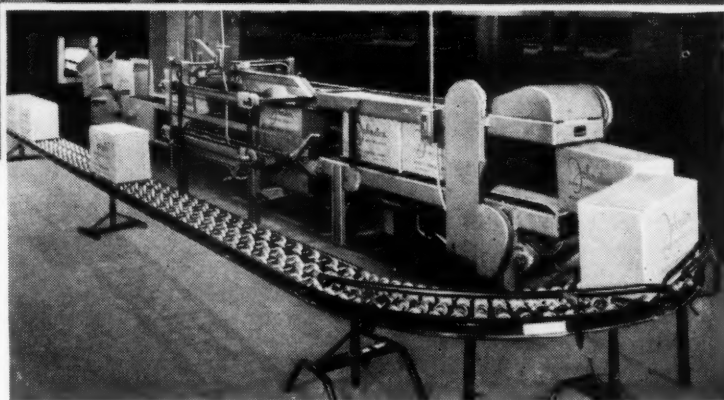


**P**ICTURED above is PACKOMATIC'S new, sturdy, Turret Type Packer Weigher at work for Robert A. Johnston Co., Milwaukee, Wis. . . . The ideal unit for packaging soft powdered products into bags, cans, or cartons.

PACKOMATIC'S Packer-Weigher fills approximately 90% of the total net weight into the container at the first station. Container is then lowered and transferred onto gross weigher platform—where filling operation is completed. Filled container is then delivered onto the circular discharge plate—all automatically. PACKOMATIC'S Packer-Weigher handles containers from 6" to 22" high, weights from one to 25 lbs. depending upon product and container size . . . Interchangeable augers and tubes make switch from one container size or weight to another a simple matter. Many other desirable features.

PACKOMATIC'S Model "D" Paper Shipping Case Gluer & Sealer is used by JOHNSTON to help speed its internationally known products to market. Write for latest word on shipping case gluing and sealing—by PACKOMATIC.

For better packaging tomorrow, consult your Metropolitan Classified telephone directory for name of nearest PACKOMATIC office. Advice and counsel are yours with absolutely no obligation.



## TYPICAL PACKOMATIC EQUIPMENT

Case Sealers • Case Imprinters • Carton Sealers • Volumetric Fillers • Net Weight Scales • Carton Making Machines • Dating (Coding Devices) • Paper Can Tube Cutters • Paper Can Tube Gluers • Paper Can Shrinkers • Paper Can Cappers • Paper Can Set-up • Conveyors.



# PACKOMATIC

PACKAGING MACHINERY

J.L. FERGUSON CO. JOLIET, ILL.

Chicago • New York • Boston • Philadelphia • Baltimore • Cleveland  
Denver • San Francisco • Los Angeles • Seattle • Portland • Tampa • Dallas

J. L. FERGUSON CO. Dept. MP-C12  
Joliet, Illinois

Please send complete data on ☐ Case Sealing ☐ Carton Filling and Sealing ☐ Package Weighing Equipment.

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



# BEMIS complete packaging service



**GIVES YOU  
SHIPPING AND SALES  
ADVANTAGES  
AT LOW COST**

Bemis bags and services fill a wide variety of packaging needs, for a wide variety of products. On new or established products—either consumer or industrial—remember Bemis for:

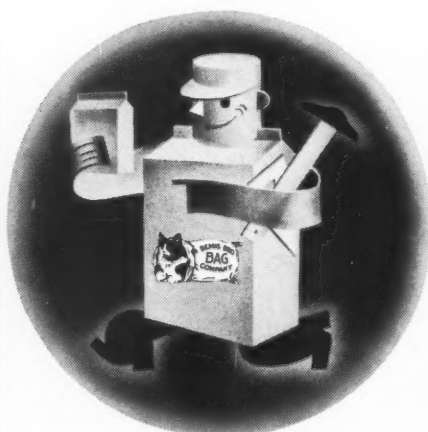
- 1.** Outstanding facilities for production, brand printing, and servicing.
- 2.** Consultation service on package design.
- 3.** Engineering service on filling, closing, and handling operations.

**Here are three of the ways Bemis is serving industry today!**



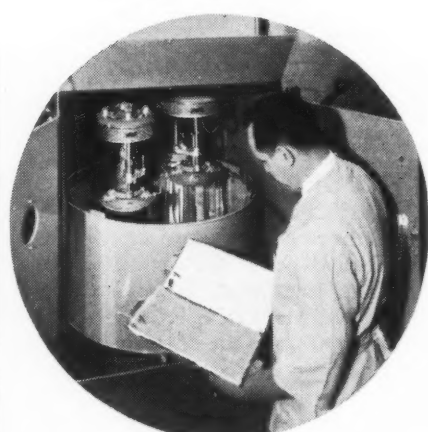
#### **DELTASEAL BAGS—**

Attractive and popular paper consumer-packages which retailers feature in counter and floor displays. Housewives like the easy-pouring, self-closing spout. Deltaseal Bags are used for packaging flour, rice, sugar, salt and many similar powdered or granular products.



#### **PAPER BAG SPECIALTIES—**

Tailor-made bags for irregular or odd-shaped objects, and unusual shipping conditions. Bemis analyzes your problem and makes recommendations. Mattresses, cans, coffins and a variety of other out-of-the-ordinary products are now packed in Bemis Bags.



#### **RESEARCH—**

To determine the best handling of your packaging problems, Bemis Shipping Research Laboratory studies your products. Laboratory and field tests are conducted. Safety, practicability, economy, appearance are all considered to make sure the bag selected will do the job.

**FOR THE BEST, LOW-COST ANSWER TO PACKAGING PROBLEMS CALL THE BEMIS SPECIALIST**

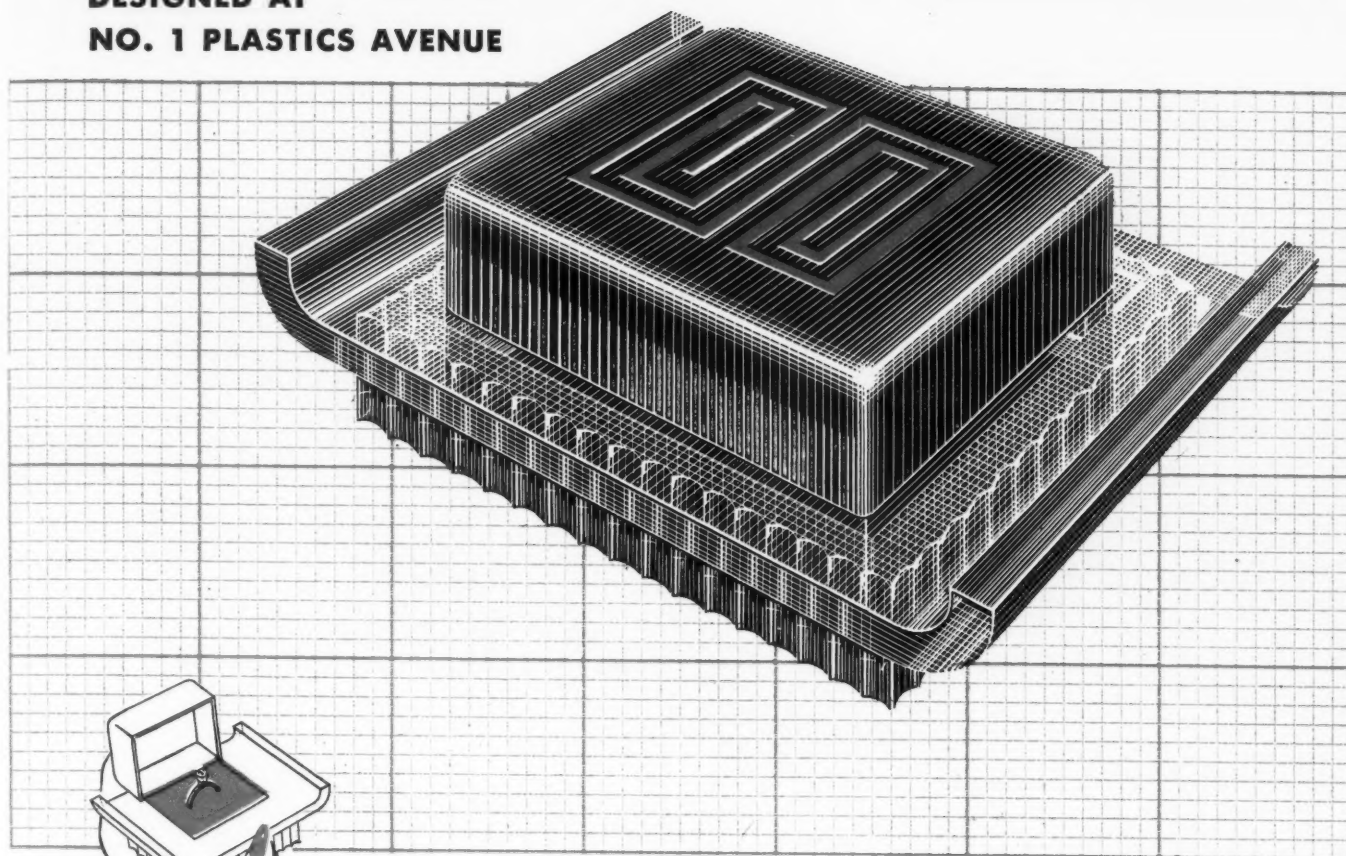
## BEMIS BRO. BAG CO.

Baltimore • Boise • Boston • Brooklyn • Buffalo  
Charlotte • Chicago • Denver • Detroit  
E. Pepperell, Mass. • Houston • Indianapolis  
Kansas City • Los Angeles • Louisville  
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New Orleans • New York City • Norfolk  
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Peoria • St. Helens, Ore. • St. Louis • Salina  
Salt Lake City • San Francisco • Seattle  
Wichita • Wilmington, Calif.

**DESIGNED AT  
NO. 1 PLASTICS AVENUE**



*Designed in Plastics... for romance...*

**PLUS SALES APPEAL**

Sales appeal teams up with romance in the design of this beautiful plastics ring box—the perfect setting for a sparkling solitaire or a handsome wedding band.

Thanks to new materials and new methods of economical plastics production, General Electric can recommend plastics packaging for more products than ever before.

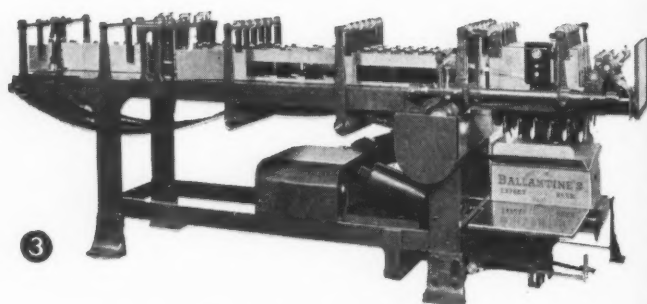
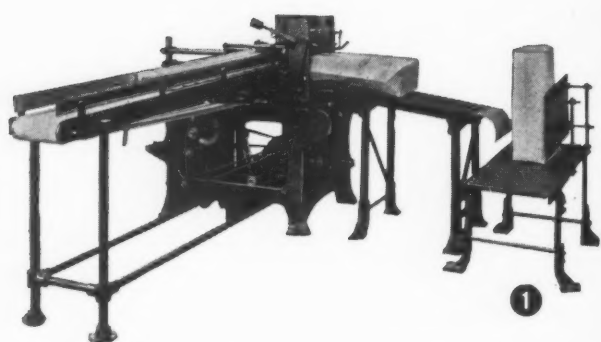
G-E designers will be glad to give you the benefit of experience gained in creating plastic packages of almost every type. Original designs will be submitted for your approval. Or, if you prefer, our consultants will help you “ready” your own design for plastics production.

General Electric’s *complete* plastics service makes impartial use of *all* plastics . . . specifies the material which best meets your own individual requirements. This unbiased selection of the right plastics for your particular job saves you time and money.

And General Electric—the world’s largest manufacturer of finished plastics products—offers you the finest available mold-making and production facilities. For more information on how G.E.’s complete plastics service can go to work for you, write Section P-6, Plastics Divisions, Chemical Department, General Electric Company, 1 Plastics Avenue, Pittsfield, Mass.

**GENERAL  ELECTRIC**  
CD46-P6

**EVERYTHING IN PLASTICS**

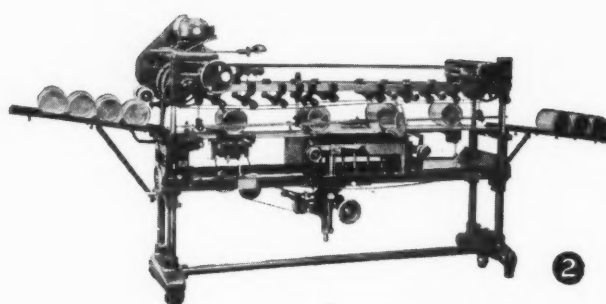


① Bag Packer

② Labeler

③ Bottle Packer

*Why are*  
**STANDARD-KNAPP**  
**MACHINES STANDOUTS?**



*Because—*

Standard-Knapp machines stand out for their top quality performance.

They meet every type of package production requirement. Standard-Knapp case sealers, bag packers, bag fillers are built sturdily and of highest quality materials.

They are simply designed to perform essential packaging operations with automatic precision.

They operate at minimum maintenance, efficiently, economically. And Standard-Knapp machinery keeps turning out standout performance throughout its long life.

\* \* \*

For these reasons, the packaging industry turns to Standard-Knapp engineers for their equipment, or when a new design is needed to handle some new packaging operation. Because Standard-Knapp machines are standouts, they have become standard in leading plants throughout the packaging industry.

## **Standard-Knapp Corp.**

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES  
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue  
NEW YORK 22, N. Y.  
420 S. San Pedro Street  
LOS ANGELES 13, CALIF.  
6 Radcliffe Rd., ALLSTON

221 North La Salle St.  
CHICAGO 1, ILL.  
2615 Western Avenue  
SEATTLE 99, WASH.  
34 (Boston), Mass.

145 Public Square  
CLEVELAND 14, OHIO  
1204 S. W. Yamhill Street  
PORTLAND 5, OREGON

300 Seventh Street  
SAN FRANCISCO 3, CALIF.  
349-350 Paul Brown Bldg.  
ST. LOUIS 1, MO.

Windsor House, Victoria St., LONDON S. W. 1, ENG.  
Orlando, Fla.





# *Eye appeal*

*in* **PACKAGE  
INSERTS**

There is an abundance of eye appeal and effectiveness in the current series of Package Inserts developed and produced for KNOX GELATINE.

*by*

**FORBES**  
LITHOGRAPH CO

**A USER OF YOUR PRODUCT . . . one of your best potentials for repeat and additional sales.**



**P**ACKAGE INSERTS permit you to talk directly to that user, just as the product is about to be used—to assure proper use; suggest various applications; feature other products.

Grace your Package Insert with plenty of **EYE APPEAL**, so as to command and hold the attention of that user long enough for your message to get across.

**EYE APPEAL:** Ingenuity in approach; neatness and smartness of layout and design; generous use of color, whenever possible; change of pace, to add **NEW** eye appeal.

We can develop resultful **EYE APPEAL** on your package inserts—we've done it on over **ONE BILLION**, for leading American manufacturers.

**FORBES**

NEW YORK CLEVELAND

LITHOGRAPH CO.

P. O. Box 513 Boston 2

CHICAGO ROCHESTER

## STAPLING AS AN AID TO MERCHANDISING

### One of the Many Advantages Of Fastening with Wire

In every manufacture where packaging is essential, forward-looking firms are not only demanding that this operation be thoroughly efficient, but are making the most of its sales-getting possibilities. Economy remains a primary goal, of course, but there is also a growing realization that the packages themselves should have both durability and the attractive appearance that makes a good merchandising impression.

A case in point is that of a prominent metropolitan catering company, which supplies approximately 20,000 sandwich packages daily to lunchrooms. The company reports that sealing these items with Bostitch machines has resulted in time-savings of 20% to 25% over former methods—and attributes a sales increase of 30% chiefly to the neater, more tempting packages that result.

From food to door hinges is somewhat of a leap, but here again better packaging proves its selling power. A New York hardware manufacturing firm found this out when it gave up putting hinges in boxes for the retail trade. The use of Bostitch machines to fasten the hinges on cards for counter display has measurably increased point-of-sale selling—while the retailer is further benefitted by reduced selling time.

Sometimes, also, a shift to stapling for one necessary advantage brings others that are equally important. When a Virginia poultry cooperative found that, due to the combination of condensed moisture and rough handling, the shipment of dressed fowl in glued cartons was no longer practical—Bostitching was decided upon—regardless of cost. Now, in addition to the securesness in shipping that was desired, the product arrives in more salable condition—while both the time and cost of packaging have been appreciably reduced.

Very many instances like the above, covering the widest variety of manufacturing fields and packaging materials, offer proof that Bostitch "fastens it better and faster with wire." This explains why manufacturers are turning more and more to this most modern method of packaging for new savings in time, materials and working space—together with improved product-appearance.

Bostitch, furthermore, offers nearly 800 models of fastening machines—the world's most complete line—and the largest staff of field representatives specializing in stapling. In this outstanding combination of equipment and technical assistance the manufacturer is reasonably assured of finding a speedy, successful solution to his problems in packaging or fastening.

ANOTHER  
BOSTITCH  
EXAMPLE



## Locking the Skeleton in a Bag

### SAVED 80% FASTENING COST



ONE  
OF  
800

A manufacturer of high-quality airplane luggage uses Bostitching instead of hand-tacking to fasten the plywood skeleton, and saves 80% on the operation.

#### MORE BOSTITCH SAVINGS.

In thousands of other cases Bostitch is lowering fastening costs: attaching two lipstick holders to display cards for the previous cost of one... stitching leather to metal in a grease gun packing at a saving in time and materials of half the cost of using bolts and nuts... sealing corrugated cases of candy in half the former time.

**WHAT DO YOU FASTEN?** Whatever you have to fasten: metal, plastics, cloth, wood, paper or leather—in any

combination—you may find that one of the many versatile Bostitch machines can do it better and faster with wire.

Skilled research engineers, and 250 fieldmen in 91 key cities offer you the benefits of 50 years' Bostitch experience in solving fastening problems.

**WRITE FOR THE FACTS.** New Broad-side 188 shows representative models of the 800 Bostitch stitchers, staplers, tackers, hammers... the world's most complete line. Write for your copy.

## BOSTITCH

AND FASTER  
*fastens it better, with wire*

ALL TYPES OF STAPLES APPLIED BY MACHINES  
ALL TYPES OF MACHINES FOR APPLYING STAPLES

Bostitch (Boston Wire Stitcher Co.), 504 Mechanic Street, Westerly, R. I.  
(Bostitch-Canada, Ltd., Montreal)

Please send literature checked:

- ☐ B-132, Shipping Room tools and applications ☐ B-157, Bostitching—the modern carding method  
☐ B-175, Bostitching for Bag Sealing ☐ B-188, Showing representative Bostitch time-saving tools

Name .....

Company .....

Address .....

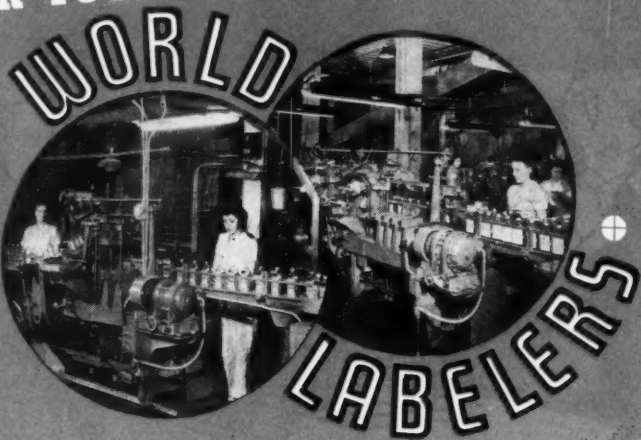


Fred W. Wasner, 7319 N. Bouvier St., Philadelphia, got here first with the correct answers to our "Quiz Contest" on packaging papers, so he wins first prize of \$100.00. Second prize of \$50.00 goes to Harry M. Oakley, 923 Ford Bldg., Detroit. James H. Goggins wins third prize of \$25.00. Mr. Goggins lives at 37 St. Helena St., Perry, N. Y. As you might expect, the ladies also know the facts of life in packaging paper, and Miss Bess Horlick, 545 West End Avenue., New York City, copped the fourth prize of \$15.00. And way out in Long Beach, California, is a fellow named Ed. M. Marks who gets fifth prize of \$10.00.

It's fun to run a quiz contest; it's encouraging, too. We hoped people read our ads in this paper, but we never knew till now how keen packaging paper users are. And we are getting so many inquiries for so many special papers for such unusual needs that we are getting an education ourselves! **MATTHIAS PAPER CORPORATION** headquarters at 165 W. Berks St., Phila. 22. New England address—Box 127, Wellesley, Mass. Southern address—Guilford Bank Building, Greensboro, N. C.



WHATEVER YOUR LABELING REQUIREMENTS...



AUTOMATIC • SEMI-AUTOMATIC • HIGH PRODUCTION • VARIETY



YOU GET THE BEST LABELING IN THE WORLD



- ⊕ WORLD BEE-LINE
- ▲ WORLD ROTARY
- \* WORLD TURRET
- ⊕ WORLD MODEL-S

Write for Bulletins

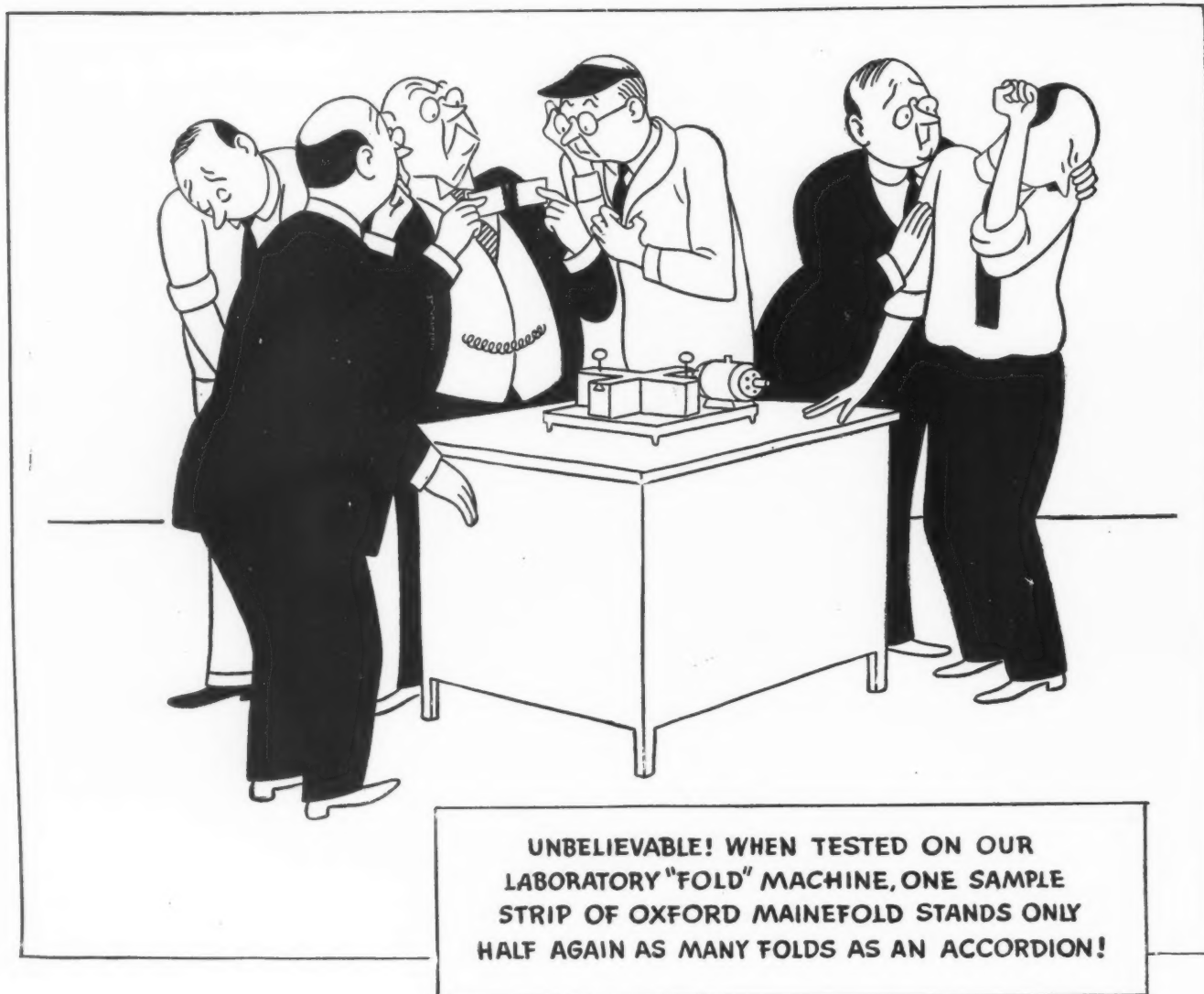
**"YOU GET THE  
BEST LABELERS  
IN THE WORLD"**

## ECONOMIC MACHINERY COMPANY

*Builders of World Automatic and Semi-Automatic Labelers for Every Purpose*

**WORCESTER, MASSACHUSETTS**

New York Philadelphia Pittsburgh Chicago San Francisco Denver  
Louisville Salt Lake City El Paso Seattle Portland Phoenix London  
Montreal Toronto Winnipeg Newfoundland Vancouver Mexico City  
Sydney, Australia Wellington, N.Z. San Juan, P.R. Ciudad, Trujillo, D.R.



**N**O matter which of the many Oxford papers an Oxford craftsman happens to be making, he welcomes the constant laboratory testing as proof that his skill is still as keen as ever.

In the "fold" test, for example, sample paper strips are mechanically folded back and forth to determine how much bending they will take without breaking. Standards are well beyond normal use—but all papers must meet them.

Oxford papers get many other

exacting tests as well—for surface bond, whiteness and color accuracy, printability, and so on. Though our standards are invariably set high, we can maintain them because our facilities are complete. We do the *whole* job from wood to finished paper.

In addition, Oxford has many years' experience making over 1,000 miles of quality paper a day—plus the benefit of long research in all kinds of paper problems. So when you think of quality printing, always think first of Oxford papers.



*Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED—Polar Superfine, Maineflex, Maine-flex C1S Litho, Mainefold and White Seal; UNCOATED—Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.*

## OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

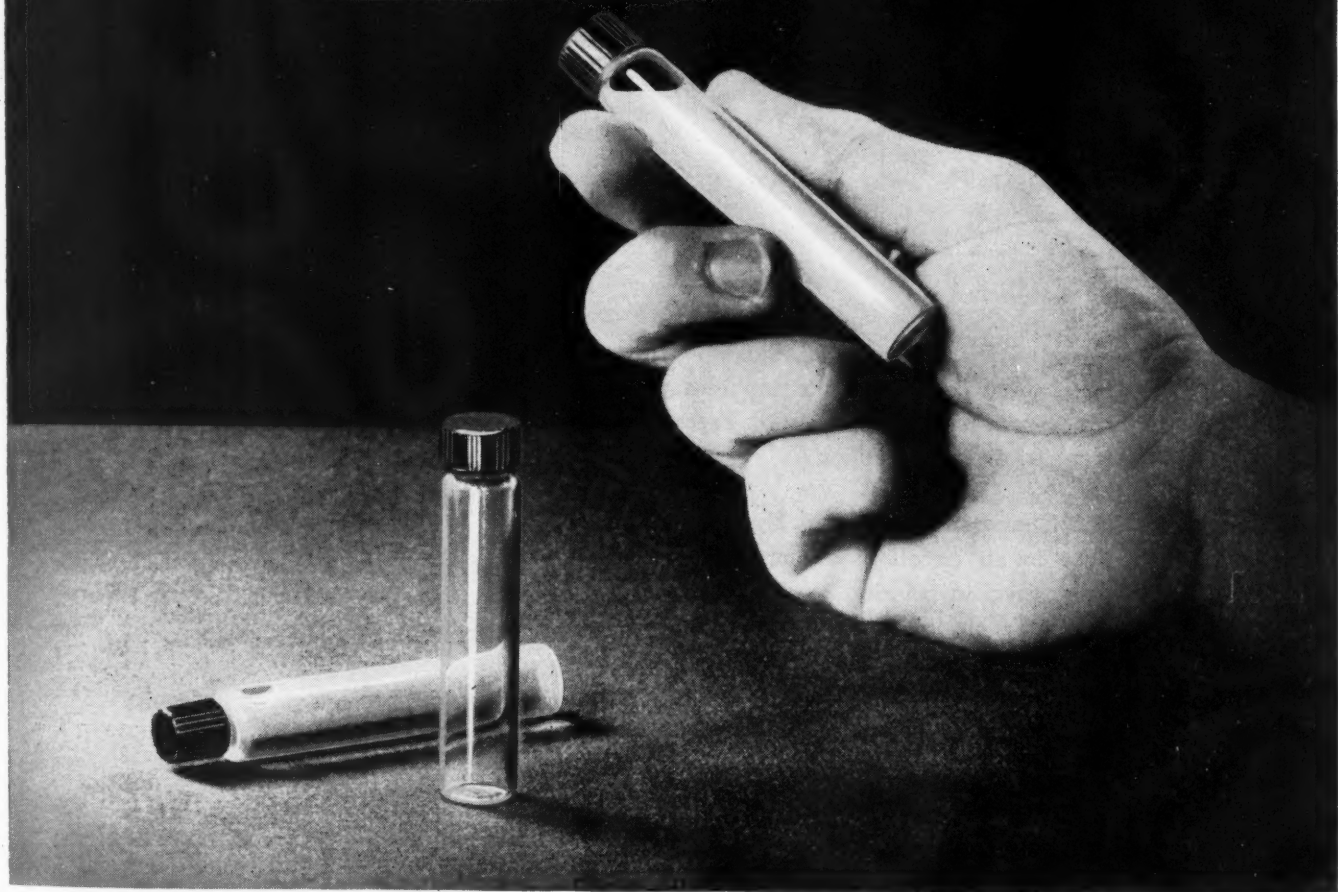
*MILLS at Rumford, Maine  
and West Carrollton, Ohio*

*WESTERN SALES OFFICE:  
35 East Wacker Drive, Chicago 1, Ill.*

*DISTRIBUTORS  
in 48 Key Cities*



"A Kimble Vial makes a  
Handier Package . . . . ."



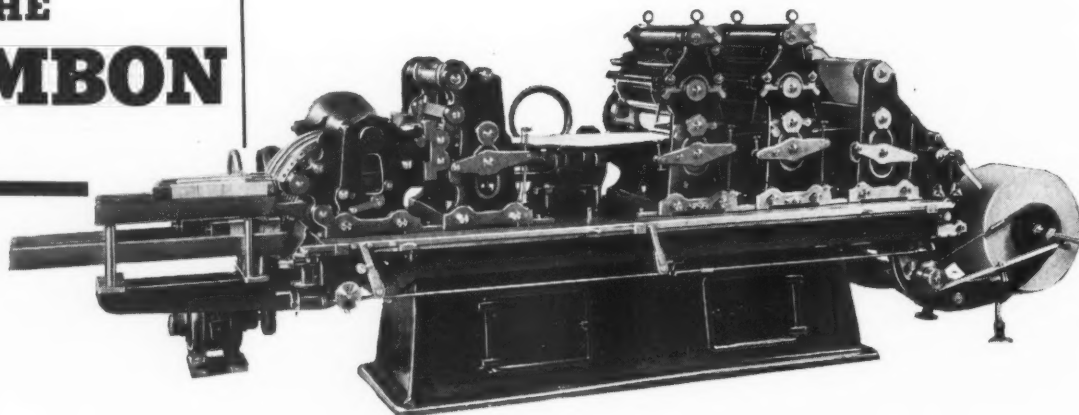
A prominent manufacturer of pharmaceuticals gives  
this reason why Kimble Glass Vials are so often  
selected for packaging small, frequently used units.

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY

# THE PRESS that SPECIALIZES in ACCURACY

## THE CHAMBON



Whether your printing job calls for gravure, offset, letterpress or a combination of these processes, the Chambon Rotary Press guarantees precision production.

The Chambon Letter Press Machine pictured here is an excellent example of precision production in printing. This rotary press is especially designed to print small labels in two colors. Basically, the design, like that of all Chambon Presses, is standard. The color units are simply geared to one driving mechanism, anchored onto a single base. (There is virtually no limit to the number of colors you can print with a Chambon Press.) This model is also equipped with an oscillating cutting head and a special delivery unit. The cutting speed is from 5,000 to 6,000 units per minute.

*This is No. 2 in a series of advertisements illustrating the Chambon Rotary Presses*

All Chambon Presses are famous for

- SIMPLICITY OF DESIGN
- INTERCHANGEABLE UNITS
- REDUCED PRODUCTION COSTS
- STRONG CONSTRUCTION
- CONSISTENT QUALITY OF WORK
- CUSTOM-BUILT TO YOUR SPECIFICATIONS

## L. CHAMBON CORPORATION

*Custom Printing Presses*

320 WEST 46th STREET • NEW YORK 19, N. Y.

Chambon Rotary Printing Equipment from 7" to 28" (Aniline, Letterpress, Offset, Roto-gravure) Diecutting, Sheetcutting or Rewinding Attachments; Slitters and Rewinders from Tissue to Cardboard; Laminating and Coating Attachments. Complete line of Converting Equipment for Cigarette Papers; Box-Printing and Forming Machines (Folding and Set-up).

# LOOKING FOR *Dramatic* MERCHANDISING?



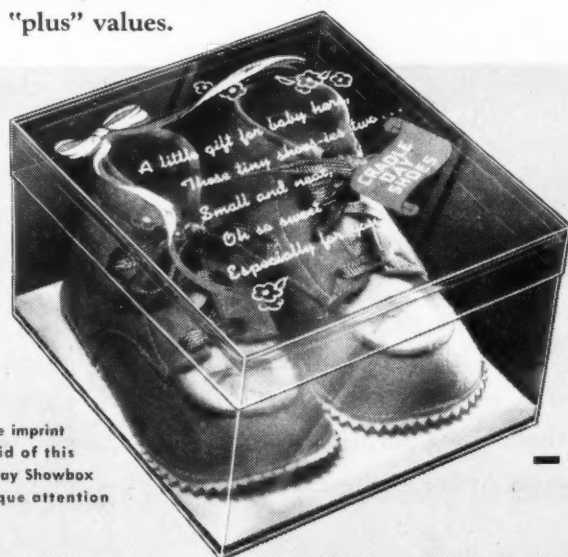
## HERE'S HOW

SOUTHERN COMFORT in 1946 again used Showboxes to glamorize their product's holiday appeal. A fine product thus gets added attractiveness for gift giving.

But added attractiveness for gift items is only one of the many SHOWBOX "plus" values.



In this Showbox, nestled in colorful shredded Cellophane, Southern Comfort looks its most appealing best.



The verse imprint on the lid of this Cradle Day Showbox is a unique attention getter.

JUST AS

*Dramatic*  
for  
BABY SHOES

-OR "WHAT HAVE YOU"

# SHOWBOX

If your product has eye-appeal, it belongs in a Showbox  
5221 NATURAL BRIDGE • ST. LOUIS 15, MO.

Division of CENTRAL STATES PAPER & BAG CO.

CHICAGO  
520 N. Michigan Ave.

NEW YORK  
342 Madison Ave.

DETROIT  
1951 East Ferry St.



**SEE THIS FIRST DISPLAY**

**MAKE YOUR OWN BAGS!**



*Kono-Mead*

**HIGH SPEED  
BAG-MAKING  
MACHINES**

We are now exhibiting at our Flushing, L. I. headquarters the amazing high-speed electronically controlled bag-making machines which produce heat-sealed bags with glue reinforcements at the rate of 5,000 to 12,000 bags per hour—with only one operator!

**NOW READY  
FOR  
DELIVERY**

These high-output, low-cost bag-makers are coming off the assembly line daily. Come and see them in operation. If you wish, you may place your order at the exhibit.

**KONO-MEAD EQUIPMENT CORPORATION**

133-23 35th AVENUE • FLUSHING, LONG ISLAND, N. Y. • TEL. FL. 3-8113



"that's it  
in the  
blue bottle"



Color stops the eye, starts the sale . . . pack to attract in

# Maryland Blue



**MARYLAND GLASS CORPORATION**  
BALTIMORE, MARYLAND

CHICAGO: Berman Bros., Inc., 1501 S. Laflin St.

CINCINNATI: J. E. McLaughlin, 401 Lock St.

KANSAS CITY: Aller Todd, 1224 Union Ave.

MEMPHIS: S. Walter Scott, 608 McCall Bldg.

NEW YORK: Maryland Glass Corp., 270 Broadway

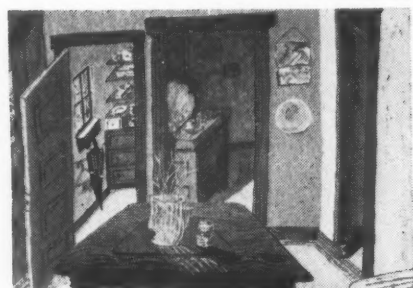
SAN FRANCISCO: Owens-Illinois Glass Co.,

Pacific Coast Division, 135 Stockton St.

ST. LOUIS: H. A. Baumstark, 4030 Chouteau Ave.



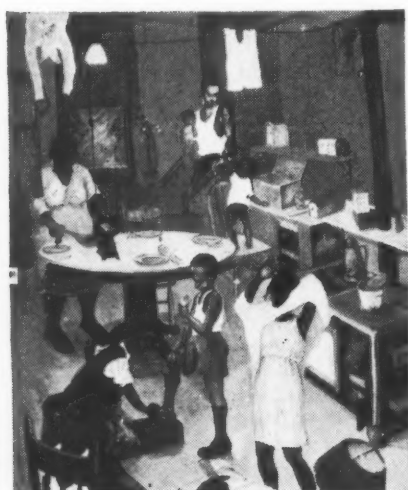
ELEANOR  
Helen Gilman, Age 18.



BLUE ROOM  
Erick Sijers, Age 16.



BIG FREEZE  
Lennart Anderson, Age 17.



FAMILY MORNING  
Sterling Curry, Age 19.

MIDNIGHT DANCE OF THE OKIES  
Lois Ault, Age 15.



## Better & better!

The third Ingersoll Art Award Contest for high school students conducted by the United States Time Corporation under the auspices of Scholastic Magazine drew an even better gallery of contributions than the first two contests... And Einson-Freeman is again privileged to publish the calendar which reproduces the prize winning awards. This third calendar, as were the earlier two, are genuine collectors' items... and we'll be glad to send you a copy if you let us know you want one.

**T**HIS calendar represents display at its best... built on an idea which is a service, an inspiration to young artists, recognition of talent... with a specific interest and appeal for the youth audience. And while the idea behind the Contest and the calendar is not ours, we repeat... that a good idea is the best basis for display. And we are just as much interested in finding or furnishing the idea as we are in its visual execution. A meeting of minds may get more business for your business and ours!

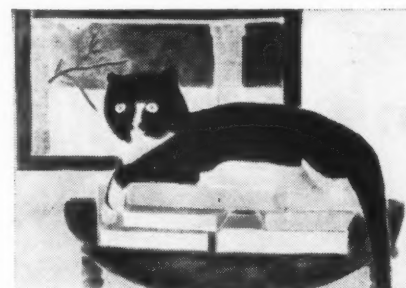
**Einson-Freeman Co., Inc.**  
Ideaful Lithographers  
Starr & Borden Aves., Long Island City, N.Y.



THE SNOW CAME  
Herbert Wiley, Age 17.



AUGUST TWILIGHT  
Charles Chappell, Age 16.



TIPPIE  
Mildred Hallman, Age 15.



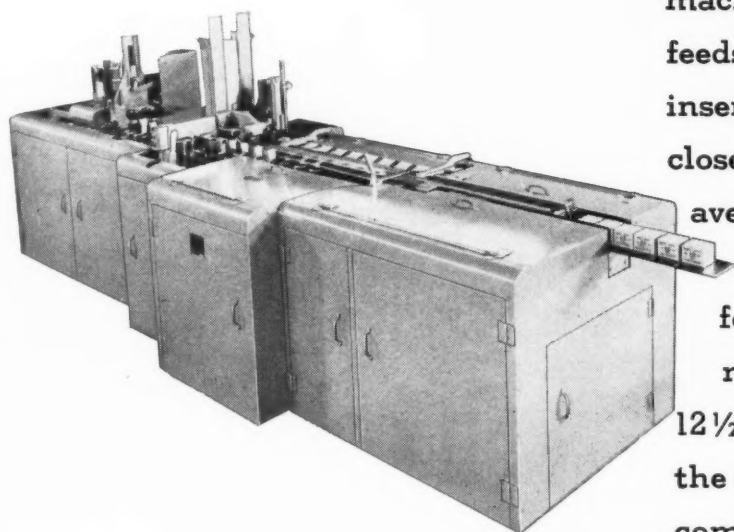
SATURDAY NIGHT  
Jerry Wolfish, Age 18.



THE YOUNG ARTIST  
Herbert Steinberg, Age 18.



# **CAN YOU CARTON 7200 BOTTLES FOR \$1.52**



**T**HIS Jones Constant Motion Cartoner receives the bottles from the preceding machine. It feeds and folds a leaflet—feeds and opens the carton—gradually inserts leaflet and load into the carton—closes and tucks both carton ends—at an average rate of 7200 packages per hour.

This cartoner will work for you for 62¢ per hour—including power, maintenance and depreciation at 12½% annually. Add the hourly wage of the one operator—estimated at 90¢—and compare the \$1.52 total with your present cost!

For complete information, write us today enclosing samples of your product.

## **R. A. JONES & COMPANY, INC.**

P. O. Box 485

CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

*Opening  
new opportunities in swift  
and versatile production*

*Rotogravure*  
**HYROTO**  
*Presses*

**ROTOGRAVURE ENGINEERING Co.**

**( A Subsidiary of Miller Printing Machinery Co. )**

**1117 REEDSDALE STREET**

**PITTSBURGH, PENNSYLVANIA**



Among transparent packages

# The differences are marked...

## in Ethocel Sheeting

In both merchandising and manufacturing, Ethocel Sheeting stands out because it is made from Dow ethylcellulose, the leading packaging material among the cellulose derivatives.

Merchandisers gain sales power from Ethocel Sheeting because it retains its fine clarity and luster. It will not discolor or become shabby. They gain in product protection because Ethocel Sheeting is tough. It keeps its flexibility despite aging. It survives handling, shelf-wear and wide

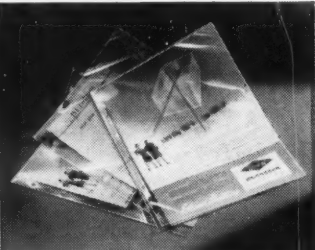
variations in temperature.

Manufacturers gain easy, low-cost fabrication with Ethocel Sheeting. Its pliability permits bending, forming and extra deep drawing. It can be beaded, crimped, scored, folded, cemented, riveted, sewed or stapled and it readily lends itself to printing techniques.

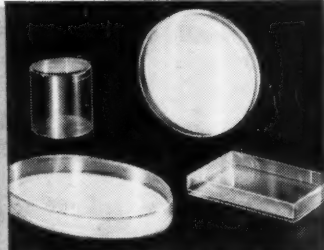
Ethocel Sheeting is different. It's Dow ethylcellulose. That's why it does so well the things you hope to accomplish with transparent packaging.



Box covers of Ethocel Sheeting give products a quick introduction to customers.



Loose-leaf display envelopes of Ethocel Sheeting easily meet demands for long wear.



Ethocel Sheeting's ease of fabrication permits swift production of containers for many uses.

PLASTICS DIVISION

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis • Houston  
San Francisco • Los Angeles • Seattle

# DOW PLASTICS

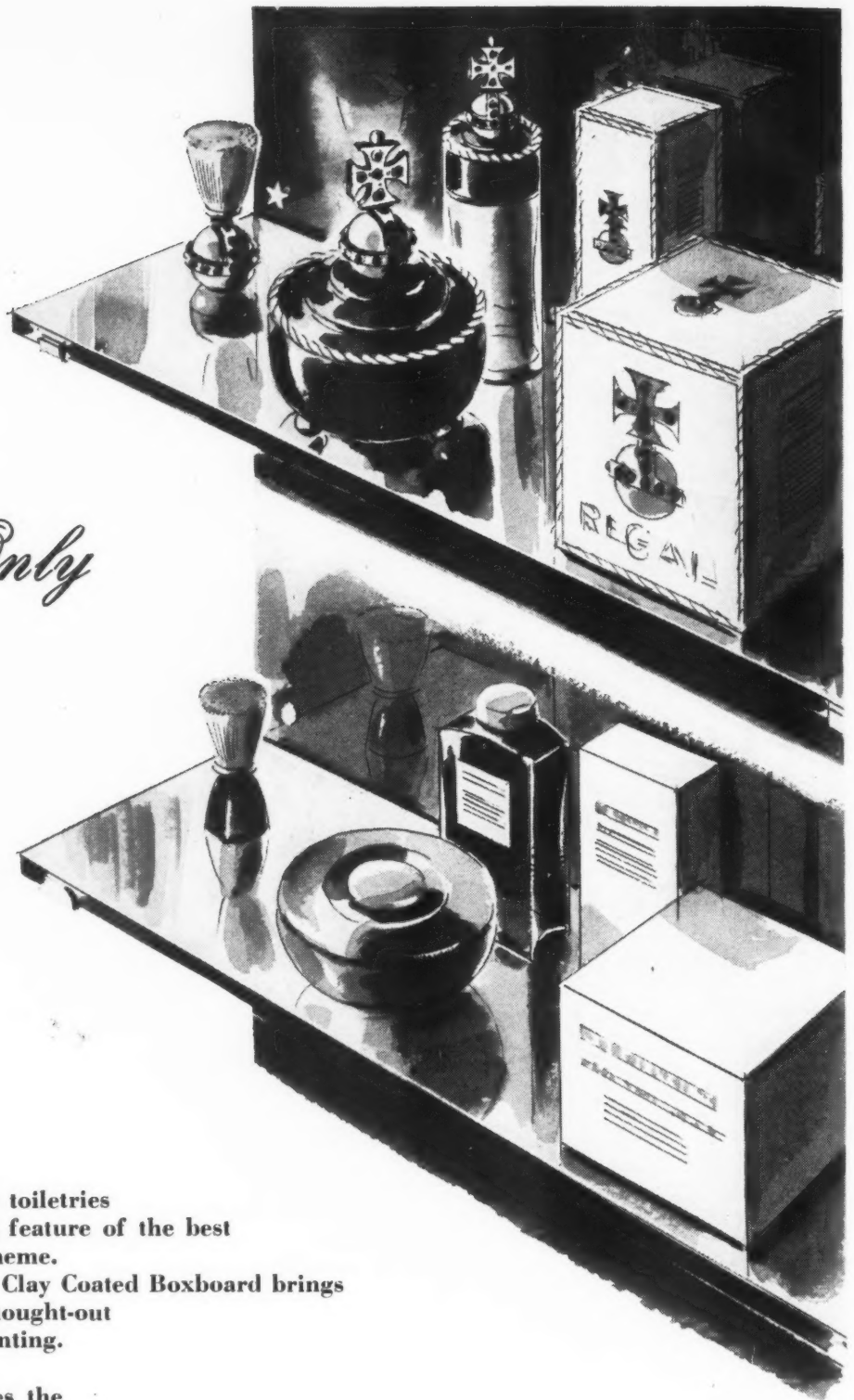
FOR BETTER PACKAGING:

ETHOCEL SHEETING • STYRON • SARAN FILM



*For Men Only*

*\$10*



There are more brands of men's toiletries than one can recall. The leading feature of the best is often an original packaging theme. Here the sensible use of Ridgelo Clay Coated Boxboard brings a rich, smooth finish to a well thought-out combination of materials and printing. Selling at a tenth the price the same careful planning guides the packing of any volume line for men. The ingredient that adds much to sales appeal and little to cost is again Ridgelo Clay Coated. For this reason it is chosen for the cartons of many popular men's needs. Be sure Ridgelo is your choice.

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

REPRESENTATIVES:

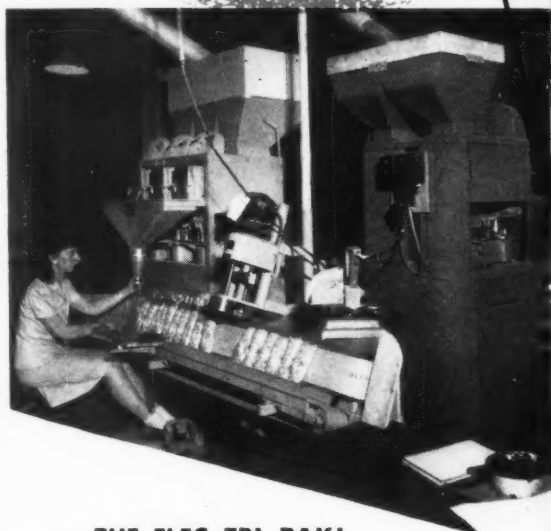
H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia



there's  
still a  
spot to  
cut  
costs



...Packaging!



#### THE ELEC-TRI-PAK!

Unmatched accuracy plus gentle handling that eliminates breakage—two of the advantages the Minnesota Macaroni Co. gets from their Triangle Elec-Tri-Pak Weighers illustrated. These models are semi-automatic and set a pace for the operator.

Other semi-automatic and completely automatic models are available for handling 15 to 80 or more packages per minute—cans, cartons, bags—2 oz. to 5 lbs. Write for 20 PAGE BROCHURE.

*Headquarters for High Speed Precision  
Weighing and Filling Equipment*

**S**URVEYS of packaging departments show conclusively that relatively few are realizing lowest possible costs. Excessive overweights, breakage, spillage, excessive hand labor all take their toll. Many packagers fail to recognize this because they are not familiar with the advances which have taken place in packaging equipment in recent years. For example, new Triangle Elec-Tri-Pak Weighers are handling products never before successfully packaged by machine and making savings that just were not possible a few years ago. It doesn't cost anything to find out—write for literature and outline your requirements.

## TRIANGLE PACKAGE MACHINERY CO.

907 N. SPAULDING AVE., CHICAGO 51, ILL.

Weighers, Fillers

Carton Sealers, Auger Packers

# The tube that made doctors say "Ahh-h-h"



Just what the doctor ordered—Sal Hepatica's "physician's sample," distributed prior to the period of wartime shortages. *Convenient* is one word for this one-dose tube. *Safe* is another.

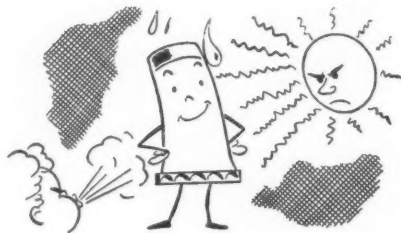
But when this same sample was packaged in a glass vial, *use at your own risk* would have applied more accurately.



Because, like most glass, this vial had the unpleasant habit of cracking up in packing or shipment.

To solve this problem, we of Sun Tube suggested our compact, collapsible one-shot tube. And a neat solution it was, because every symptom of package-trouble disappeared.

No more samples crushed or broken in transit. Instead, every sam-

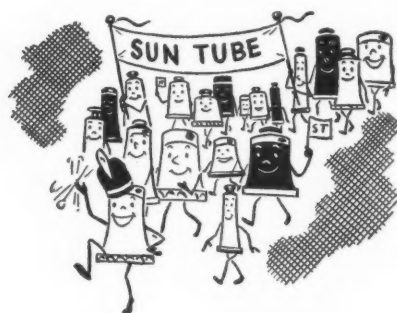


ple reached some doctor's office in perfect condition. And neither air nor moisture nor light could penetrate this special tube, not until the very moment of use.

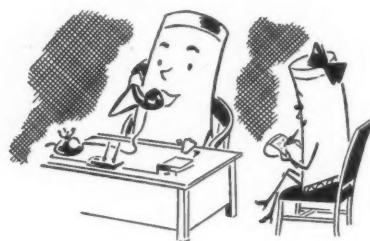
**How about your product?**

It's entirely different? Probably. Yet perhaps your packaging problem

isn't quite as "different" as you think. For almost any problem gets closer to solution when it gets this kind of design ingenuity and resourcefulness... a fact we have proved time and again in the case of a host of products never before considered prospects for a tube.



Is yours among them? Certainly *any* product will benefit from perfect packaging in the race for markets that is only just beginning!



Plenty of reason, it seems to us, for getting in touch with Sun Tube. A phone call or letter to our nearest representative will do it. Or to our main office at 181 Long Avenue, Hillside, N.J.

## Sun Tube Corporation

HILLSIDE • NEW JERSEY

CHICAGO 1, ILL.  
James L. Coffield, Jr.  
360 No. Michigan Avenue

ST. LOUIS 1, MO.  
M. P. Yates  
Arcade Building

ST. PAUL 1, MINN.  
Alexander Seymour  
615 Pioneer Building

LOS ANGELES 27, CALIF.  
R. G. F. Byington  
1260 North Western Ave.

CINCINNATI 8, OHIO  
Ralph H. Auch  
3449 Custer Road



Moisture-Free means

# Factory Fresh.....



Products "Dry Packed" with Desiccite are protected against damaging moisture. Metal products reach the ultimate user free from damaging corrosion — bright with "Factory Fresh" sales appeal.

Foods retain their freshness, crispness and taste.

Desiccite — a Filtrol product is the new, highly efficient, *low-cost* drying agent. A small quantity placed inside an adequately moisture-proof package or shipping container protects the contents.

Filtrol engineers will gladly consult with you on your packaging problems. Write today for full information.

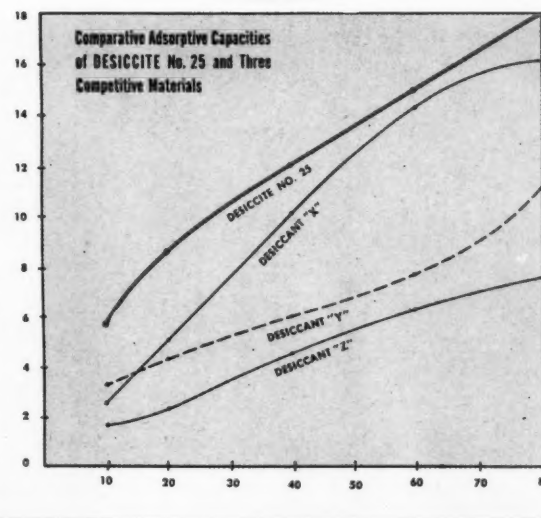
## Dry Pack with **DESICCITE** \*

\*Reg. U. S. Pat. Off.

"GRADE A"

*a Filtrol Product*

WEIGHT H<sub>2</sub>O ADSORBED BY 1 CUBIC FOOT DESICCANT



RELATIVE HUMIDITY-%

The above comparison of desiccants represents the four most widely used types, namely Desiccite No. 25, Activated Alumina, Anhydrous Calcium Sulphate and Silica Gel.

FILTROL CORPORATION • 634 South Spring St., Los Angeles 14, California • Plants: Vernon, California, and Jackson, Mississippi

**A TOAST TO A BETTER  
1947!**

We sincerely hope that shortages,  
tension, doubt, and strife will  
forever pass from our lives.  
Here's a Merry Christmas and a  
Happy New Year to all our old  
friends and friends to come.  
A heartfelt "Good Luck!" to all.

**GLASS  
CONTAINER &  
CAP OUTLET COMPANY  
876 BROADWAY  
NEW YORK 3, N. Y.**

from John C. Slowey  
and Company



## SQUARE WALKING

... Don't walk around the square, when the diagonal will get you there — direct — and faster too! In measuring your work you often draw a line — corner to corner — to help you find the right dimension. So when you need "box wraps" follow the beaten track to Bobby's door. His super "box wrap" service can't be licked. For speed and accuracy our customers compare it with the "scale by diagonal" trick.

FOR CLARITY, COLOR AND CONSISTENT QUALITY

**HAYNES LITHOGRAPH COMPANY, INC.**

1140 East-West Highway

Silver Spring, Maryland



# ONCE MORE

# Sefton

makes the

# "PACKAGE PERFECT"

A Distinctive Can for RITE WAY PRODUCTS CO.  
Memphis Tenn.

True to tradition, Sefton has again designed a package that fits the specific needs of the manufacturer . . . perfectly! It's the popular string-opening can that's ideal for Rite-Way Products' tube patches because it's factory-sealed, tamper-proof . . . and has full opening for easy filling. It opens easily and can be closed again, too. The black lacquered metal ends accent the attractive label! Another proof of Sefton's supremacy in package-making!



**Sefton**  
**FIBRE CAN**  
**COMPANY**  
ST. LOUIS . . . . . NEW ORLEANS



DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul  
Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle

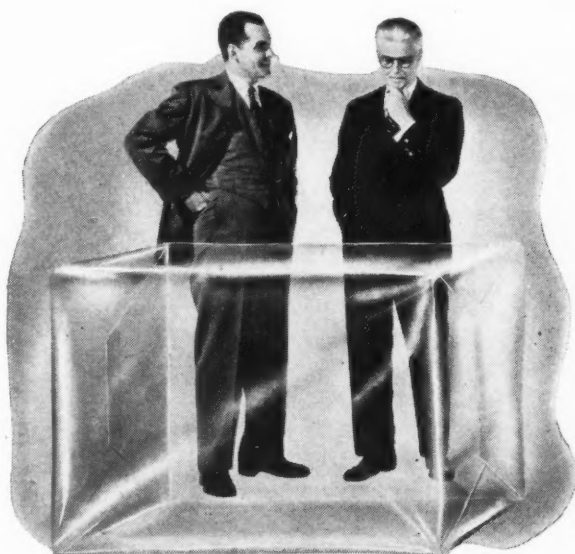
## There are three sides to the modern package



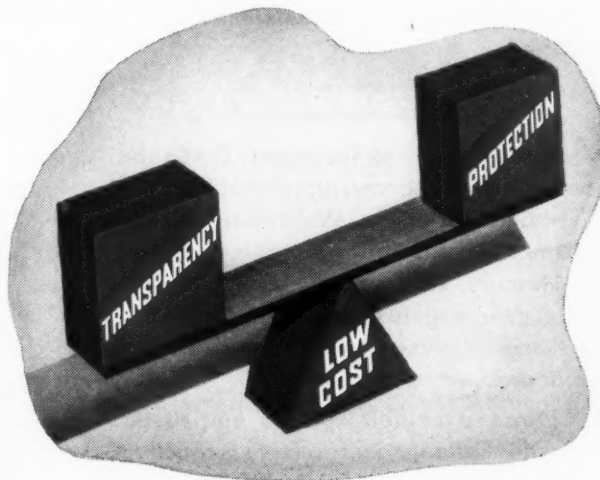
**THE MERCHANDISING SIDE** of your package is becoming increasingly important. A recent nationwide survey in supermarkets revealed that 50 per cent of all purchases are *unplanned*. In a transparent package, your product is its own best salesman... will attract its share of impulse purchases.



**THE PROTECTIVE SIDE** of packaging is another vital consideration. Shoppers will become more value conscious as the supplies of products increase. Sanitary moistureproof Du Pont Cellophane *protects* what it displays—safeguards freshness and flavor—helps maintain peak quality.



**THE COST SIDE** of your package can't be overlooked, either. Authorities recommend careful scrutiny of all aspects of marketing costs and selection of a package that does its merchandising and protective jobs *economically* as well as effectively.



**THE RIGHT BALANCE** of packaging factors is available in Du Pont Cellophane. It provides sales-building transparency plus necessary protection—at *lowest cost*. The demand for Cellophane still exceeds the supply, but we hope our converters and ourselves can soon supply all needs.

*Write today* for our new booklet, "Design for Selling," a study of consumer buying habits in supermarkets. E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division Wilmington 98, Delaware.



# Cellophane

*Shows what it Protects—at Low Cost*

BETTER THINGS FOR BETTER LIVING  
...THROUGH CHEMISTRY

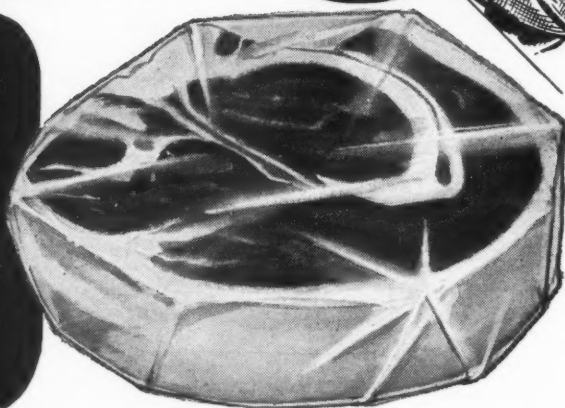
To protect kisses



... and steaks



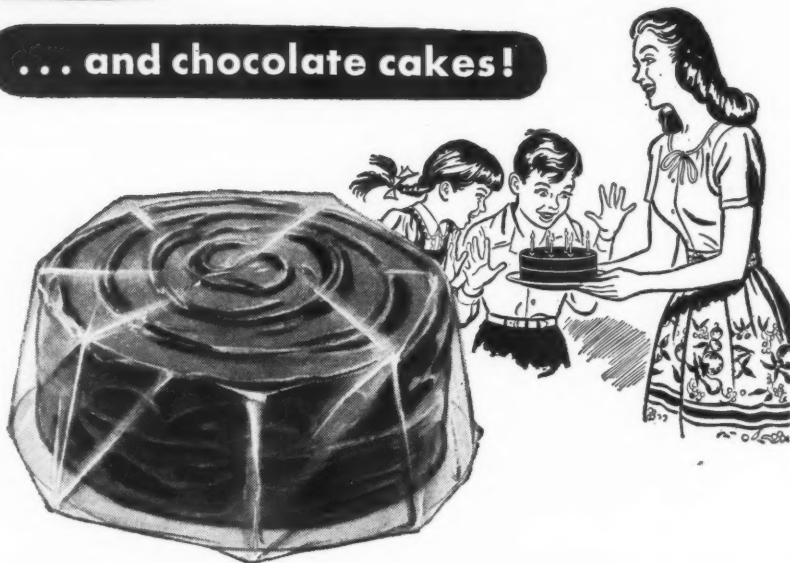
It's **SYLVANIA**  
for Cellophane!



... and chocolate cakes!

Assured flavor and freshness! That's the secret of the growing popularity of Sylvania Cellophane. Yes, Sylvania Cellophane is a beautiful wrap, but it is also much more. This versatile packaging material guards against air, dust and moisture ... keeps the product in tip-top condition from processor to consumer!

Don't overlook today's improved Sylvania Cellophane. It offers even better protection and more beauty. We hope that soon even more will be available for every requirement.



**SYLVANIA CELLOPHANE**

Made only by **SYLVANIA DIVISION**  
AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd Street, New York 17, N. Y.

Plant: Fredericksburg, Va.



•Reg. Trade Mark



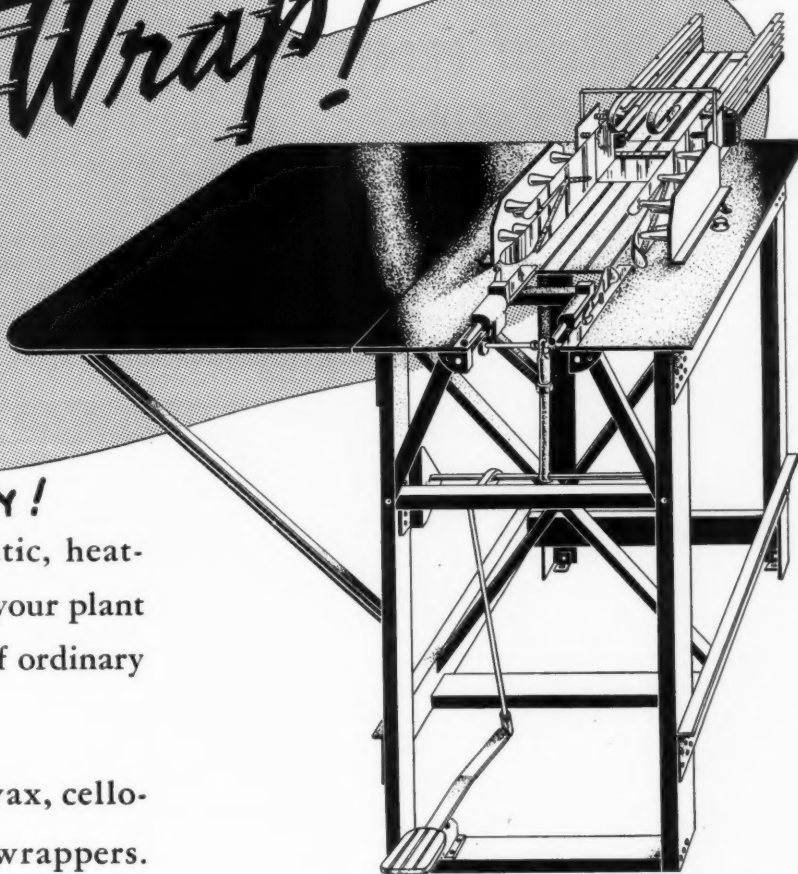
# Introducing Speed-Wrap!

## SAVES YOU MONEY!

*Speed-Wrap*, new semi-automatic, heat-sealing overwrapper, installs in your plant for less than one-third the cost of ordinary machines.

*Speed-Wrap* completely seals wax, cellophane and other heat-sealing wrappers. Special device insures complete sealing of package humps and irregularities.

*Speed-Wrap* requires but one operator, wraps 25 to 30 packages per minute. Easily adaptable to conveyor production. Eliminates hand wrapping.



*Speed-Wrap* units are portable, self-contained, use any standard A. C. current. Positive thermostatic heat control.

Each *Speed-Wrap* unit is engineered to your needs, and assures maximum production and efficiency at low cost.

**SHORT TERM  
DELIVERY.  
CLIP COUPON  
AND WRITE  
US TODAY!**

**HOWARD ENGINEERING CO., DEPT. M-12**  
6620 1/2 Sunset Boulevard, Hollywood 28, California

Please send me complete information on the new Speed-Wrap machine. The package we wrap is .....in. x.....in. x.....in. Type of overwrap .....  
Product being wrapped .....

Firm Name .....

My Name .....

Address .....

City ..... Zone ..... State .....

SPECIALTY PAPERS

LAYOUT PRINTED  
PACKAGING  
PAPERS

GIFT WRAPS

# DECOTONE PRODUCTS DIVISION

CUSTOM-CREATES PACKAGING MATERIALS FOR SPECIFIC PRODUCT NEEDS

PACKAGING PAPERS

MOISTURE-VAPOR PROOF PAPERS

PROTECTIVE COATED SPECIALTIES

PRINTED & EMBOSSED BOX WRAPS

PRINTED TRADE MARK PAPERS

LAMINATED PAPERS

HEAT-SEALING PAPERS

*and Many Others*

## DECOTONE PRODUCTS DIVISION

### *Fitchburg Paper Company*

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

# A STUDY IN *Curves*



This impulsive lady builds sales curves. Great retail merchandisers woo her—study her buying habits. They know (as national surveys have proved) that she makes  $\frac{3}{4}$  of her decisions as to *what brand* to buy when she's *in the store* (at the point-of-sale). She is Mrs. America—the 65 million adult women who buy  $\frac{3}{4}$  of all goods sold at retail. To know *her* buying habits *pays*.

The number of womens' buying decisions your product can win at the point-of-sale *depends largely on the appearance of your package!*

The package that attracts their eyes, arouses interest—and makes a better impression of quality within than competing packages **WINS SALES.**

*Never Underestimate the Power of the Package.*



LET RITCHIE WORK WITH YOU to develop a better package at low unit cost. One that will instantly identify, fully protect and conveniently dispense your product—practical—production-planned—easy to fill or pack—to handle, to stack and display—but *above all* designed for eye-appeal, for quality impression—a package that sells!



**Never**  
**the Power**

COPYRIGHT 1946, W. C. RITCHIE & CO.

**W.C. Ritchie**  
and COMPANY  
8851 Baltimore Avenue • Chicago 17

- ★ SET-UP PAPER BOXES
- ★ FIBRE CANS
- ★ TRANSPARENT PACKAGES

**Underestimate**  
**of the Package!**

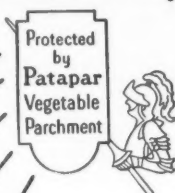
NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • ATLANTA • NEW ORLEANS • DENVER • PORTLAND • SEATTLE • MIAMI

DECEMBER • 1946

65



*The Patapar Keymark*



**5 words...millions have read them**

“ Protected  
by  
**Patapar\***  
Vegetable  
Parchment ”

The Patapar Keymark is nationally advertised. Millions of women have seen it in magazines. And when they see it on food wrappers, they know the product inside is well protected...because Patapar has high wet-strength, resists grease, and is pure in texture.

If you use printed Patapar we'll include the Keymark on your printed wrappers...

at no extra cost to you. It's a way you can impress customers that your product is well protected.

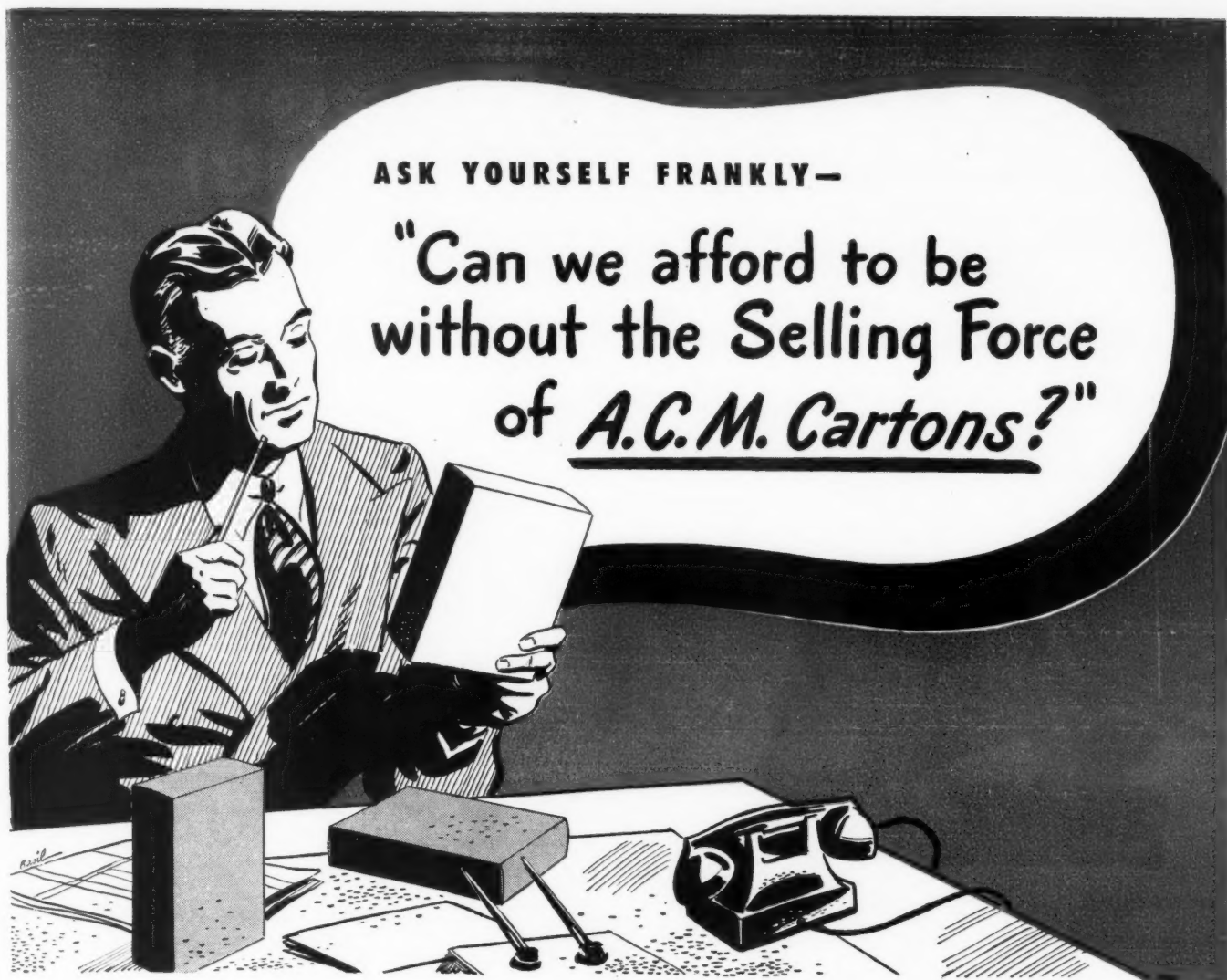
The printing of Patapar is done in our own plants. Here we have complete modern equipment for printing Patapar in one color or several colors — by letterpress or offset lithography. We handle every detail.

\*Reg. U. S. Pat. Off.

**Paterson Parchment Paper Company • Bristol, Pennsylvania**

*Headquarters for Vegetable Parchment Since 1885*

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA  
BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.



**WHY THESE CARTONS  
ARE TOPS:**

Whiter—brighter—smoother  
—tougher—more uniform—  
more rigid—non-yellowing  
—fold better—print better.

The Secret is in the SURFACE!

Your first look at an A.C.M. Clay Coated Carton will convince you why you need them for today's competitive markets:

Colors are more brilliant, sparkling, attention-getting ... the gleaming white, smooth surface is non-yellowing, retains its clean, attractive appearance on dealers' shelves ... the design, either in letterpress or lithography, is reproduced in finest detail!

Year after year, more merchandise-minded manufacturers are changing from drab, colorless, uninviting packages to tasteful, colorful, eye-arresting A.C.M. Clay Coated Cartons. Why don't you investigate the selling force of these famous cartons for your products now?

**AMERICAN COATING MILLS, INC.**

*America's Largest Producers of High Quality Clay Coated Cartons and Carton Board*

Elkhart, Indiana • Chicago • New York

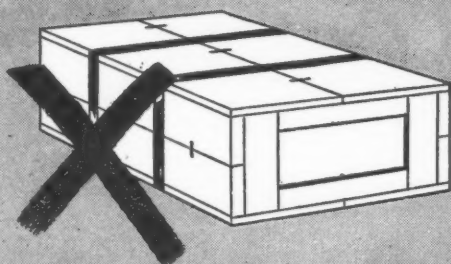
Affiliated Company: Modern Packages, Inc., Memphis, Tenn.

***A.C.M. Clay Coated Cartons***  
***and carton board***

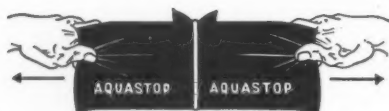
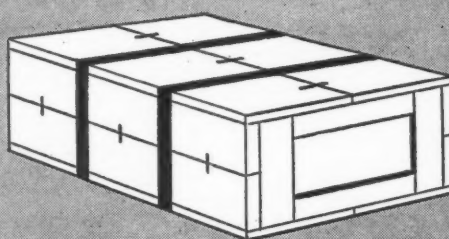
# Both

# are Waterproofed Packages BUT—

**This one failed!**  
**This package couldn't breathe!**



**This one was satisfactory!**  
**This was a "Breathing package!"**



- No cracking**
- No tackiness**
- No flow**
- No loss of flexibility**
- Retains waterproofness**
- "Breathes" a minimum of 5 grams per 100 sq. in. per 24 hours**
- Withstands minimum hydrostatic pressure of 40 lbs. per sq. in.**
- Positive fool proof seal**

*Investigate* this new modern case lining. Write for new illustrated AQUASTOP brochure showing how AQUASTOP can be applied to your peacetime shipping problems.

Both of these cases were given the same attention in packing the article to be shipped. Both were packed with a waterproof case liner. But the package on the left failed—the goods it contained were ruined with corrosion from condensation due to temperature changes.

The material shipped in package on the right arrived at its destination in satisfactory condition. This package was lined with AQUASTOP, a new synthetic impregnated, coated and chemically-treated strong, tough, flexible and resilient waterproof liner fabric.

The difference between the two packages lies in the fact that with AQUASTOP, the whole package could "breathe" moisture-vapor. No humid or damp conditions could get sealed in, with no way for the moisture to get out. With AQUASTOP, any moisture inside the package can breathe, or pass thru to the outside, at once removing the costly dangers of ruin from condensation.

A new technical case liner development, AQUASTOP adequately meets every specification, from exposure to severe temperature changes, to withstanding packing stresses and strains. Available panels or pre-fabricated bags to meet your size requirements, AQUASTOP is the modern packing case liner. AQUASTOP CEMENT gives it a "chemical weld" at all seams, strong as the material itself, or the material can be commercially heat sealed.

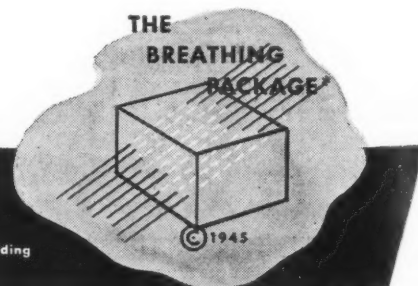
## PROTECTIVE COATINGS CORPORATION

681 Main Street

Belleville 9, N. J.

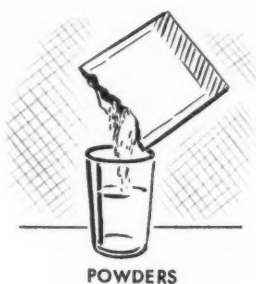
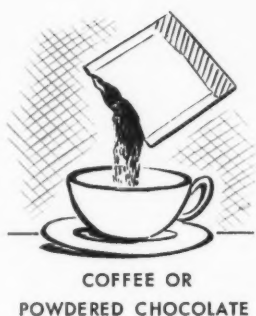
# AQUASTOP

\*Pat. Pending





A FEW OF MANY  
USES FOR K-D  
PAPERS:



## NARY A LUMP IN THESE POWDERS ... Thanks to Moisture-Proof K-D Packaging Paper

Shake one of these little packets . . . Listen . . . The powders are free and loose, not soggy, lumpy or caked together in one gob. When you tear open a packet, the contents *pour*.

That's one reason why the American Dietaid's Company of Yonkers packages these dietetic gelatin desserts in Keller-Dorian Functional Packaging Paper. This unique aluminum foil lamination is a positive moisture vapor barrier . . . particularly effective in keeping highly hygroscopic substances flavor-

fresh and free-flowing. It's also light-proof, greaseproof, odorless, non-toxic. And it takes readily to airtight heat-sealing in quantity.

Whether *you* package gelatin desserts or soup mixes, coffee or powdered chocolate, medicinal powders or pills, here's an idea: Look into the advantages of K-D Functional Packaging Paper for heat-sealed individual servings of *your* product.

We'll gladly send you samples you can test yourself. Just mail coupon below.



**FUNCTIONAL PACKAGING PAPERS  
for Protecting Perishable Products**

KELLER-DORIAN CORPORATION  
Empire State Bldg., New York 1, N. Y.

Gentlemen:

Kindly send me samples of K-D functional packaging papers for testing purposes.

Name.....

Company.....

Address.....

City.....State.....

Safeguard flavor and color with

# REYSEAL

the sparkling new heat-sealed wrap  
for confectionery and foods



The image shows several boxes and bags of Tatsies potato shreds. One box is labeled 'Cheese Coated POTATO SHREDS' and 'READY TO EAT'. Another box is labeled 'Tatsies 10' and 'A New Taste Experience'. A third box is labeled 'Tatsies 10' and 'Munchy'. A bag is labeled 'Tatsies 10' and 'A New Taste Experience'. The packaging features illustrations of children and the brand name 'Tatsies'.



The diagram shows a hand holding a rectangular block of material. A small flame is applied to the top surface of the block, and a seal is forming on the side.

**1. Heat Seals Tightly  
and the Seal Stays Closed**

When heat is applied to surface of Reyseal, wax bleeds through porous tissue to form a tough fiber-reinforced, leakproof seal.



HERE'S ONE OF THE MOST VERSATILE and practical developments in protective packaging in years: Reyseal, the great new Reynolds laminated foil wrap.

Shown on this page are just a few of Reyseal's many possibilities. Many leading manufacturers of foods and confections are using Reyseal today as an overwrap for cartons and boxes . . . as a heat-sealed bag for potato shreds, hard candies and other products . . . as an intimate wrap for individual tablets.

For frozen foods, too, Reyseal as an outside overwrap offers outstanding advantages. It forms a positive barrier to moisture vapor, and

light rays, thus preventing dehydration, and safeguarding color and flavor.

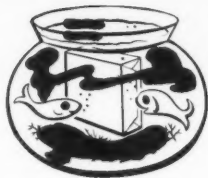
Reyseal comes in a variety of gauges—it can be thick or thin—the foil surface can be outside or inside. The package design can be reproduced in beautiful full-color rotogravure right on the foil surface itself, making your brand name sparkle forth from the shelf.

Easy to handle . . . economical to use, Reyseal heat-sealed overwrap may be applied by hand or by standard automatic equipment designed for heat sealing. For further information write Reynolds Metals Company, Foil Division, Richmond 19, Virginia.



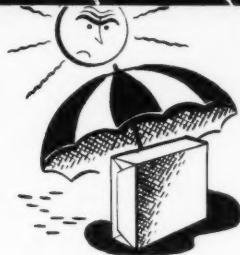
## REYNOLDS ALUMINUM FOIL

1250



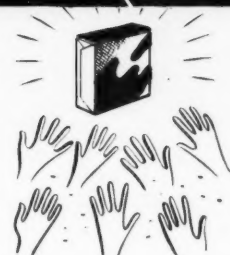
### 2. Moisture Vapor Can't Get in...or out

A thin metallic shield of pure aluminum forms a positive barrier to moisture-vapor transmission . . . no dehydration . . . no added moisture.



### 3. Destructive Light Rays Turned Aside

Light rays harmlessly bounce off Reyseal . . . aluminum's high reflectivity protects against loss of flavor . . . and discoloration.



### 4. They Reach for the Sparkle of Foil!

Reyseal with foil surface outside gleams and sparkles from the shelf . . . adds "buy" appeal that attracts and sells.





## Here's *Selling* as a Fine Art

What is your conception of package art? Is it a job that, in your office, looks pretty enough to be framed? Or is it a package that, in stores, moves?

The ROSSOTTI conception of the fine art of packaging is dynamic. We believe your label and carton design should do a self-service selling job for your products. To make sure that it does, our merchandising consultants start with a thorough study of your market. Only then, does our art department begin their creative work. As a result your Rossotti-designed package has competitive distinction. It stands out and urges consumers to select your brand.

Having engaged in this business since 1898, we have developed a vast store of modern packaging ideas. We add animation, foolproof directions, intriguing recipes, vitamin and health advantages or whatever feature elevates your brand above competition in consumers' eyes . . . and daily sales.

This postwar period is an opportune time to replace outdated packaging or introduce new sales stimulating containers for your products. Contact our branch nearest you without delay—without obligation. May we create a winner for you?

**Rossotti**  
SINCE 1898

**ROSSOTTI LITHOGRAPHING CO., INC. NORTH BERGEN, N. J.**

BOSTON 9, Mass.: 200 Milk Street • ROCHESTER 4, N. Y.: 183 Main Street, East  
JACKSONVILLE 9, Fla.: 6503 Sapphire Drive • CHICAGO 11, Ill.: 520 N. Michigan Avenue  
WEST COAST PLANT: 5700 Third Street, San Francisco 24, Cal.

No "Shopping Wear"  
on this Cork Grip



## ANOTHER USE FOR **CEL-O-SEAL**

REG. U. S. PAT. OFF.

You may not be able to see the "Cel-O-Seal" on this Shakespeare fishing-rod handle—but it's *there*...a transparent band that protects the cork grip against handling in the store. It keeps the cork clean and fresh . . . yet does not interfere with display.

Perhaps "Cel-O-Seal" bands can do a protective and merchandising job for you. They're available in a wide range of sizes and colors . . . can be indelibly printed with any message you wish. Easily applied by hand, they shrink to a tight, strong fit. We'll be glad to discuss with

you any application you have in mind.

"Cel-O-Seal" cellulose bands are manufactured by E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del. Also sold by Armstrong Cork Co., Lancaster, Pa., and I. F. Schnier Co., San Francisco, Cal.

**DU PONT "CEL-O-SEAL" BANDS**

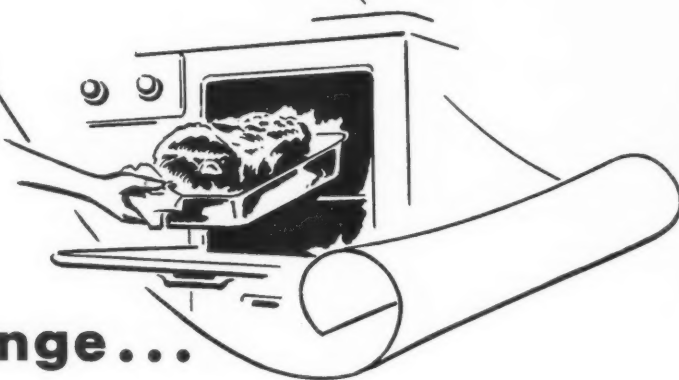


REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY



## West Carrollton GENUINE VEGETABLE Parchment



### From round-up to range...

If you want all the rich, tempting, sales-winning goodness of your products to reach your customers, you'll do well to get full-measure protection afforded by West Carrollton Genuine Vegetable Parchment.

Meat packers, for example, know from experience that this parchment is superbly strong—and keeps its

strength wet, dry, or frozen—is grease-resistant, odorless, insoluble. In fact, this fine parchment is ideal for meat and dairy products of all kinds. Next time, specify West Carrollton Vegetable Parchment. Complete facilities in our own plant for printing in one or more attractive colors (in special inks).

**WEST CARROLLTON PARCHMENT CO.,** WEST CARROLLTON, OHIO





## *Feminine Appeal*

...captured with  
**PALM BROTHERS DECALS**

For fascinating and charming identification, the makers of Linda Lee Cosmetics select Palm Brothers Decals. The delicate designs and color pattern of these decals captivate consumer interest and attention.

Whether your selling appeal is ecstatically feminine or solidly masculine, our decals are adaptable to the particular demands of any market. Designed for your specific needs, whatever their nature or scope, Palm Brothers Decals distinctively mark your product for sales success.

Always at your service, we will be pleased to prepare creative sketches and quote prices with no obligation. Or if you desire, we can reproduce from your original art work without loss of detail. Write today for complete information.

**THE  
PALM  
BROTHERS**

*Decalcomania Co.*

CINCINNATI...12...OHIO...U.S.A.

Sparkle....



## a magnet for nickels

Thirty seconds ago, Sally was a calm, discerning shopper. Determined to look over the whole stock of candy in the case before she let go of that hot, moist nickel in her fist. But first-off her eye caught the sparkle of aluminum foil on the Nestlé's Chocolate Bars. And *now* look at her!

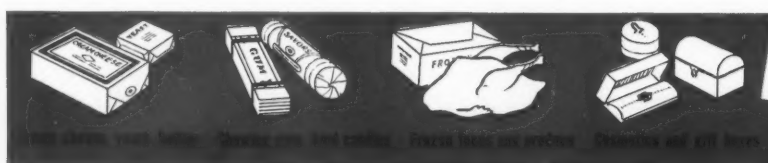
Smart packagers of many things...candy bars and cosmetics, foods and gadgets...use the sparkle of aluminum foil to catch the eye of the Sallys and the grownups. Foil attracts nickels and quarters *and* dollars.

Eye-appeal is but one reason why Alcoa Aluminum Foil makes good packaging material. Things stay fresh longer in foil. Flavor and aroma stay *in*; off-odors stay

*out*. Moisture holds steady, not too dry nor too damp.

"Aluminum Packaging" comes in many forms... foil, caps for bottles and jars, collapsible tubes, barrels and drums, aluminum ink for printed labels and cartons. Package designers and converters will soon be showing *new* packages using Alcoa Aluminum Foil. We can supply the names of these package experts. Alert manufacturers and packers will keep posted on these developments. ALUMINUM COMPANY OF AMERICA, 2129 Gulf Bldg., Pittsburgh 19, Pa. Sales offices in 53 cities.

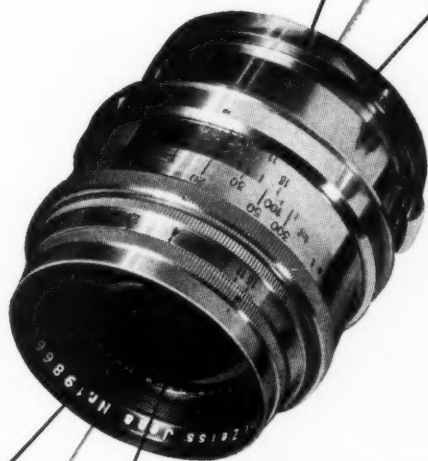
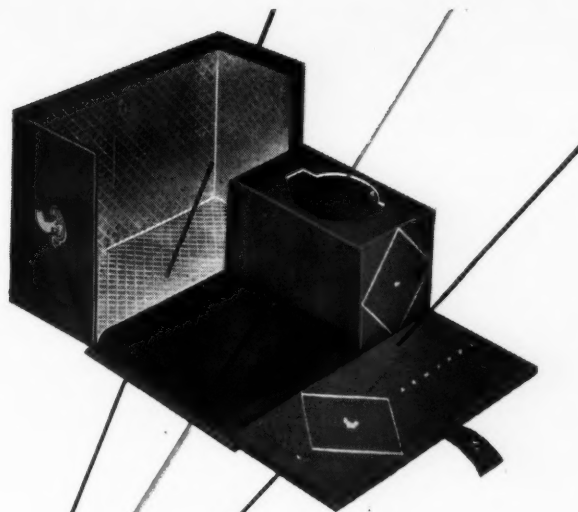
*For GOODNESS'sake in packages...*



**ALCOA**  
ALUMINUM  
FOIL



*Focused . . . . .*  
for sales!



We don't mean to imply that people are going to create a panic in an effort to get your products (although it has happened!) But we do imply that your product — properly and colorfully packaged — can create a sensation! Such is packaging crafted by Warnercraft. For color . . . for design . . . for giving your product the distinctive setting that creates sales, you can rely on Warnercraft. Let Warnercraft's experience aid your profit-making plans!

# WARNERCRAFT

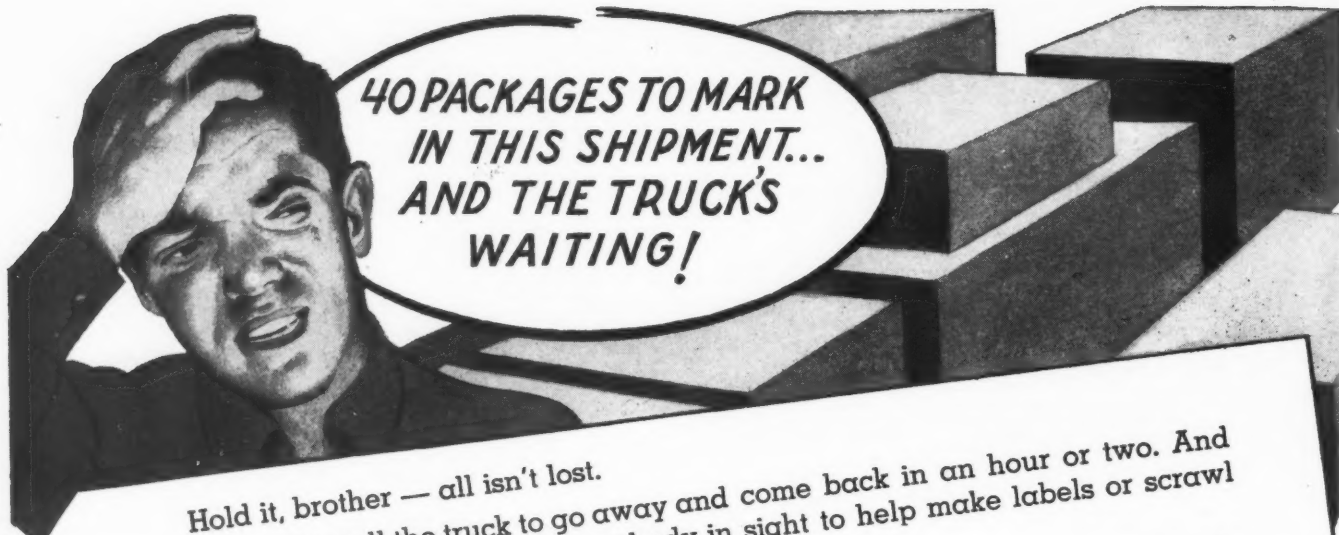
"THE FINEST WORD IN PACKAGING"

*Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.*

**THE WARNER BROTHERS COMPANY**

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.  
New York Sales Office: 200 Madison Avenue, New York, N. Y.





**40 PACKAGES TO MARK  
IN THIS SHIPMENT...  
AND THE TRUCK'S  
WAITING!**

Hold it, brother — all isn't lost.  
No need to tell the truck to go away and come back in an hour or two. And you don't have to call out everybody in sight to help make labels or scrawl the address on those boxes.

You can address them—by yourself—just as fast as you can go from box to box with the portable MULTISTAMP Duplicator. For MULTISTAMP works that fast. It prints on practically anything, too—wood, shipping tags, labels, cardboard, paper . . . you name it. On big and small packages alike . . . in hard-to-reach corners and normally inaccessible spots. And MULTISTAMP never makes a mistake!

Non-mechanical . . . no type to set. Just type or write on the stencil, snap it on the MULTISTAMP — and print! Like one-two-three, the job's done. MULTISTAMP has been giving dependable service for over 25 years.

DON'T WAIT UNTIL YOU GET IN A FIX LIKE OUR FRIEND ABOVE IS IN. ORDER YOUR MULTISTAMP OUTFIT NOW—AND ADDRESS YOUR SHIPMENTS AS FAST AS THEY'RE PACKED.

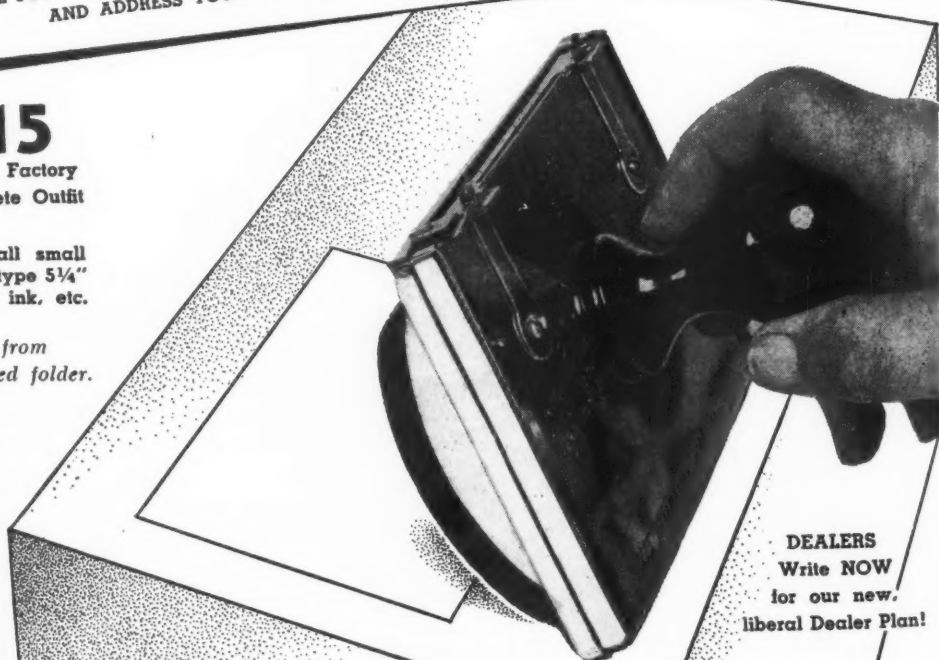
**NO. 3 MULTISTAMP OUTFIT**  
PRINTS ON BOXES, CARTONS,  
SHIPPING TAGS, LABELS, Etc.

**\$15**

F.O.B. Factory  
Complete Outfit

Also ideal for postcards, notices, all small printing jobs. Prints up to 19 lines of type 5¼" wide. Complete with case, stencils, ink, etc. Weight, 4 lbs. Guaranteed 5 years.

Other MULTISTAMP outfits from \$7.50 to \$82.50. Write for illustrated folder.



**DEALERS**  
Write NOW  
for our new,  
liberal Dealer Plan!

Reg. U. S. Pat Off.

**MULTISTAMP**  
STENCIL DUPLICATOR

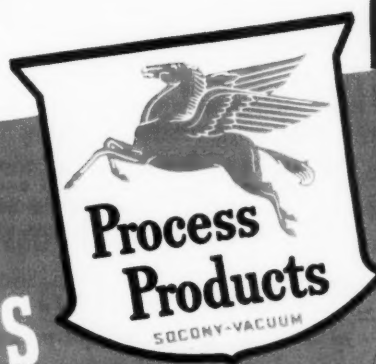
MANUFACTURED ONLY BY THE MULTISTAMP CO., INC. NORFOLK, VIRGINIA

# Special Treatments For Paper Solve Packaging Problems!

Complete Line Offered By Socony-Vacuum

BEATER-SIZING	WET-WAXED PAPER	DRY-WAXED PAPERS
<b>S/V Ceremuls A &amp; C</b> Improve sizing. Impart softness.	<b>S/V Microcrystalline Waxes</b> Improve toughness of wax films.	<b>S/V Waxes</b> Produce waterproof, bloodproof sheets.
SURFACE-SIZING	HEAT-SEALING	GREASE-PROOF PAPERS
<b>S/V Ceremul A</b> Adds water repellency. Improves finish.	<b>S/V Microcrystalline Waxes</b> Improve heat-sealing properties.	<b>S/V Petrosenes</b> As impregnants, resist grease penetration.
WATER-ABSORBENCY	MEAT WRAPS	RESIN PLASTICIZER
<b>S/V Sovasorb A</b> Improves softness and wetting properties.	<b>S/V Petrolatums</b> Produce odorless, bloodproof papers.	<b>S/V Sovaloid C</b> Softens resins used in paper coatings.
PITCH REMOVAL	OILED PAPERS	RUST PREVENTIVES
<b>S/V Sovalent 31</b> Aids removal of pitch and asphalt.	<b>S/V Prorex Oils</b> Produce odorless food wraps.	<b>S/V Sova Kotes</b> Keep repair parts from rusting in storage.
DEFOAMING	LAMINATING	
<b>Special Oils</b> Reduce foam in paper-making operations.	<b>S/V Product 2305</b> Gives flexible moistureproof bond.	

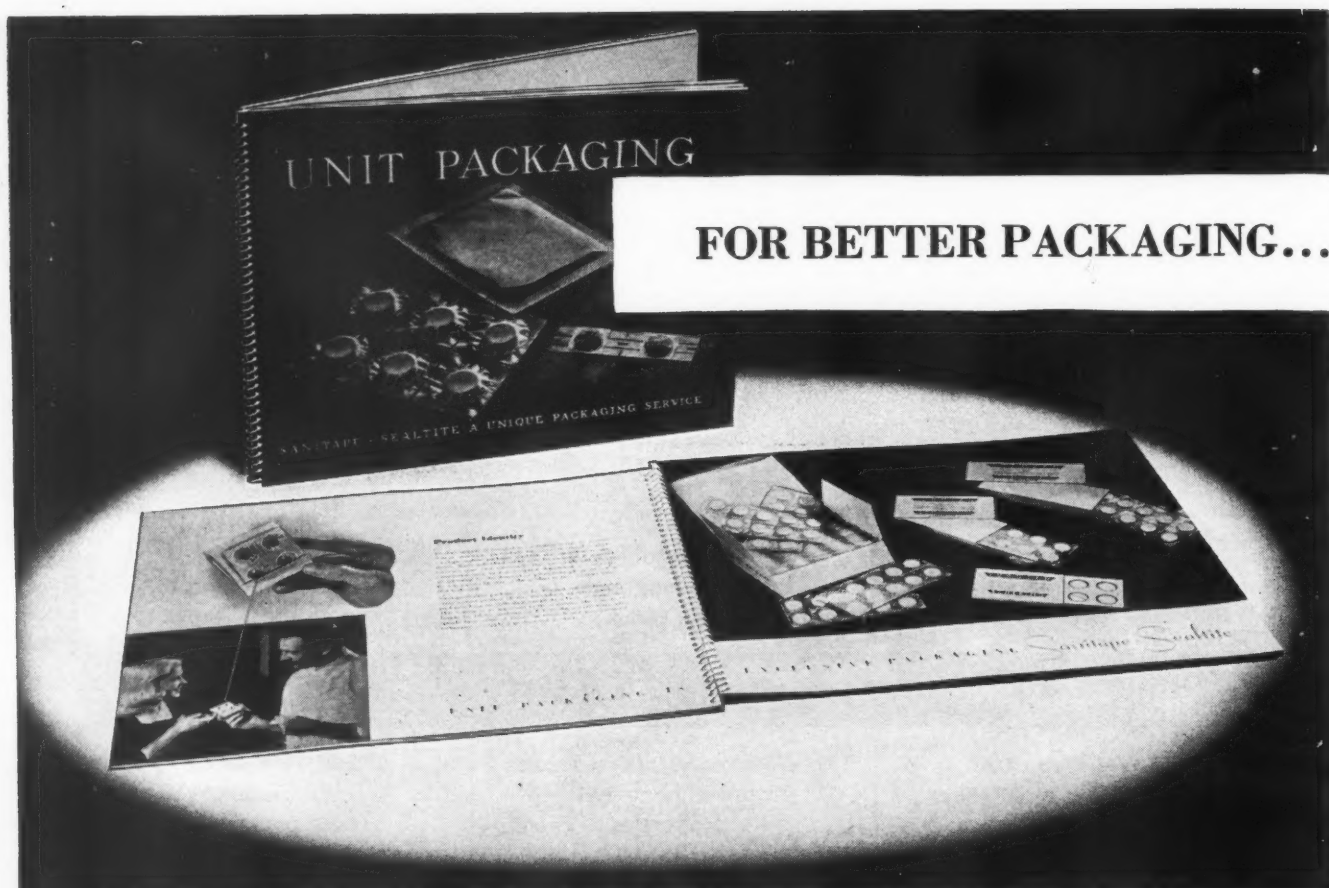
INVESTIGATE  
**SOCONY-VACUUM  
PROCESS PRODUCTS**  
Research and Service



**SOCONY-VACUUM OIL COMPANY, INC.**

26 Broadway, New York 4, N. Y., and Affiliates: Magnolia Petroleum Co., General Petroleum Corporation

Tune in The Mobilgas Program, Monday Evenings, 9:30 E.S.T. — NBC



#### THIS BOOK DISCUSSES...

- ★ Consumer preferences in packaging and the particular manner in which these are satisfied by the \*Sanitape-Sealtite method.
- ★ The distinct advantages to the manufacturer of unit-packaging—the economy, protection, convenience and attractiveness of \*Sanitape-Sealtite.
- ★ The basic forms of \*Sanitape-Sealtite from which are developed thousands of unique and successful, package adaptations.
- ★ The superb facilities of our Contract Packaging Division—a picture “trip” through our plant which shows each step in handling your product—how we actually serve as “Your Packaging Department.”
- ★ Our Engineering Division and the special, custom-machinery we design and build for unusual requirements.
- ★ The almost endless array of \*Sanitape-Sealtite packages we have created and designed in our 25 years’ experience in unit-packaging, is illustrated in the pages of this new book.

*We shall be glad to send a copy  
to those interested in unit-packaging.*

### *\*Sanitape - Sealtite and* OUR UNIQUE CONTRACT PACKAGING SERVICE

For those who are interested in unit-packaging—(pills, capsules, powders, creams and liquids), this new book provides unusually complete and specific information. There are presented basic designs of the \*Sanitape-Sealtite method together with adaptations for sampling and standard-sale packages of varying sizes—all described and illustrated in complete detail. In addition this book describes the very real advantages of Contract Packaging by \*Sanitape-Sealtite—the economy and convenience in sending us your product in bulk and letting us assume full responsibility for every packaging detail. Manufacturers of pharmaceuticals, cosmetics, foods and similar lines, who are seriously considering unit-packaging for their product, will find this new book on \*Sanitape-Sealtite very worth while—to them we shall be glad to send a copy.

IVERS-LEE COMPANY • 215 CENTRAL AVENUE, NEWARK, N. J.

\* Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit-dose is sealed in its own air-tight compartment—assuring complete protection and maintained efficacy. Packages, machines and methods fully covered by U. S. and Foreign Patents and Patents Pending.





UNIQUE  
DESIGN

MOISTURE  
PROTECTION

EYE  
APPEAL

SALES  
CONVENIENCE

SMOOTH  
PACKAGE LINE  
PERFORMANCE



WHAT ARE *You*  
SHOOTING AT?

**V**ARIED individual requirements in packaging put a premium on resourcefulness. Resourcefulness, in turn, needs complete facilities to make itself fully effective.

Ohio Boxboard's **PLANNED PACKAGING** is a combination of resourcefulness and complete facilities. It includes research, development, design, testing, manufacture of all types of board for cartons and containers, and conversion into finished product.

Whether you are aiming at better performance on the packaging line, added sales effectiveness, improved protection for your product, or coordination of cartons and containers we welcome the opportunity to show you how **PLANNED PACKAGING** can meet your special packaging requirements.



IT'S IN THE ~~BOX~~ BAG WITH  
**PLANNED PACKAGING**

# THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties

SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO

Capacity 500 tons daily

GREAT A & P TEA COMPANY • REMINGTON ARMS COMPANY • GOODYEAR  
TIRE & RUBBER CO. • STANDARD OIL COMPANY • HOWARD PAPER COMPANY  
INLAND MFG. DIV., G. M. CORP. • P. LORILLARD COMPANY • FRIGIDAIRE  
DIVISION • CHRYSLER CORPORATION • FIRESTONE TIRE & RUBBER COMPANY  
SHERWIN-WILLIAMS COMPANY • GENERAL ELECTRIC • WESTINGHOUSE ELECTRIC  
PROCTER & GAMBLE • F. W. COOK COMPANY • STERLING BREWERS • PET MILK  
COLGATE-PALMOLIVE-PEET COMPANY • SWIFT & COMPANY  
B. F. GOODRICH COMPANY • BORDEN

**INLAND BOXES  
BUILD GOOD WILL**

TEXAS • RGLAS CO. • AMERICAN  
QUAKER • PRODUCTS  
ROLLING •  
SINCLAIR • EMERSON RADIO • LIGGETT  
& MYERS • SHOE COMPANY • PURITY BAKING COMPANY

MEAD CORPORATION • NATIONAL CAN CORPORATION • HUFFMAN MFG.  
SURFACE COMBUSTION COMPANY • PHILIP CAREY MFG. COMPANY • CHAMPION

PAPER COMPANY • GARDNER-RICHARDSON COMPANY • GENERAL CIGARS  
PALMER MATCH COMPANY • NATIONAL BISCUIT COMPANY • CANADA DRY

CONTINENTAL CAN COMPANY • OYENS • FIBERGLAS CO. • QUAKER

STATE OF PENNSYLVANIA • KOLLEY CORPORATION • AMERICAN ROLLING MILL CO.

DIAMOND MATCH COMPANY • NESTLES MILK PRODUCTS • WILLIAMS COMPANY

SINCLAIR REFINING COMPANY • CANADA DRY • EMERSON RADIO • BROWN

SHOE COMPANY • HOLLYWOOD CANDY COMPANY • LINCOLN ENGINEERING

JASPER DESK COMPANY • HUNTINGBURG FURNITURE COMPANY • WASHINGTON

MFG. COMPANY • IGLEHEART BROTHERS • HOOSIER DESK COMPANY • ROPER

PECAN COMPANY • CORNBLEET BROTHERS • METROPOLIS BENDING COMPANY

TENNESSEE PRODUCTS CORPORATION • DERBY CONE COMPANY • ACME BOOT

**INSIST ON A**

*Package by Inland*

**INLAND**

CONTAINER CORPORATION

*Corrugated Fibre Boxes*



INDIANAPOLIS, INDIANA • EVANSVILLE, INDIANA • MIDDLETOWN, OHIO • CINCINNATI, OHIO  
DAYTON, OHIO • CHICAGO, ILLINOIS • MILWAUKEE, WISCONSIN • DETROIT, MICHIGAN

here's one way  
to make  
a label stick



But Monsanto Plastics  
Research  
gives you a better way...  
with HEAT SEALING LABELS

Of course you wouldn't actually consider nailing the label to your wrapper, but if you've been dissatisfied with existing expensive and inefficient methods of labeling, you'll welcome this latest development of Monsanto's plastic packaging researchers.

*Heat sealing labels that stick!* A new, better plastics coating "engineered" to do the job perfectly and profitably, gives you a label that hangs on to your package the way you want it to.

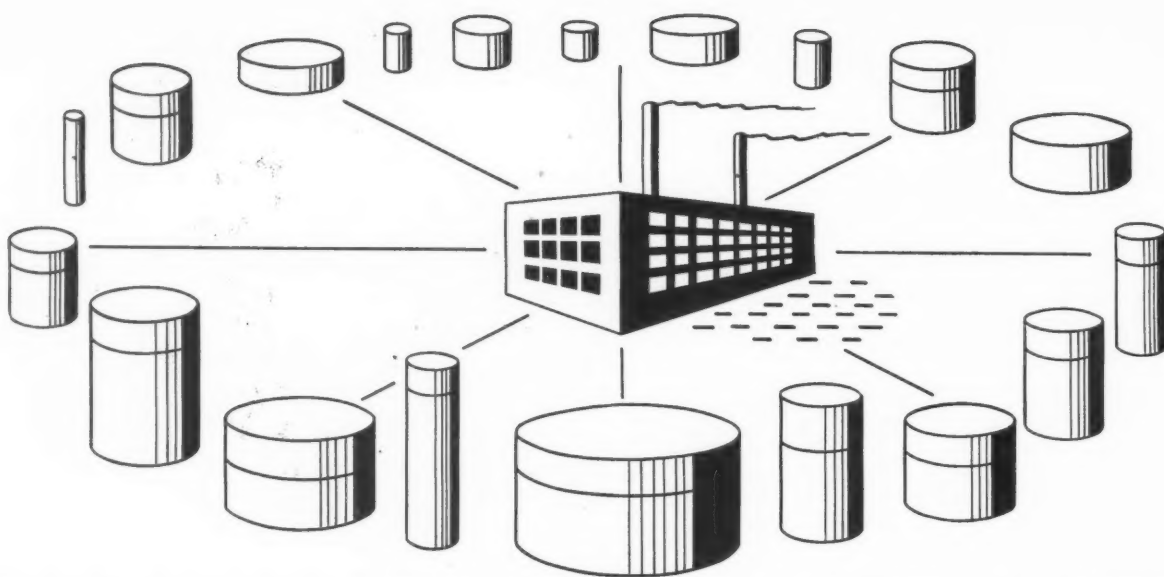
These heat sealing labels eliminate

expensive and unsatisfactory inserts, bands, inflexible and hard-to-read printing methods and glued labels. They are quickly changed on the labeling machine for easy coding or dating . . . they are easy to position . . . they offer every opportunity for colorful, sales-making designing.

Ask your label supplier . . . or write direct for information. Simply address MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Mass. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver. Reg. U. S. Pat. Off.







## PACKAGES GO ROUND AND ROUND *at Harcord--*

That's because Harcord are specialists in round paper package production designed to meet the needs of modern industry.

In a new, up-to-the-minute plant, a staff of packaging experts backed by years of practical experience—are ready to work out your packaging requirements.

Immediate Delivery in a wide range of styles and sizes.

Harcord specializes in

- Sturdy round canisters for drugs, chemicals and food
- Cylindrical and oval boxes with curled edges for cosmetics
- Efficient dust guns for insecticides
- Metal end containers of all types

*IF ROUND PACKAGES ARE ON YOUR LIST, SEE*

**HARCORD MANUFACTURING CO.**

*A Division of the Meehan-Tooker Co.*

152 BAY STREET • JERSEY CITY 2, N. J. • Phone DELaware 3-1212

# FABCOSE<sup>\*</sup>

VERSATILE...NEW...AND UTTERLY DIFFERENT!  
PLASTIC COATED PAPER THAT "ACTS" LIKE CLOTH!

## DURABLE AND DECORATIVE FABCOSE HAS A HUNDRED USES

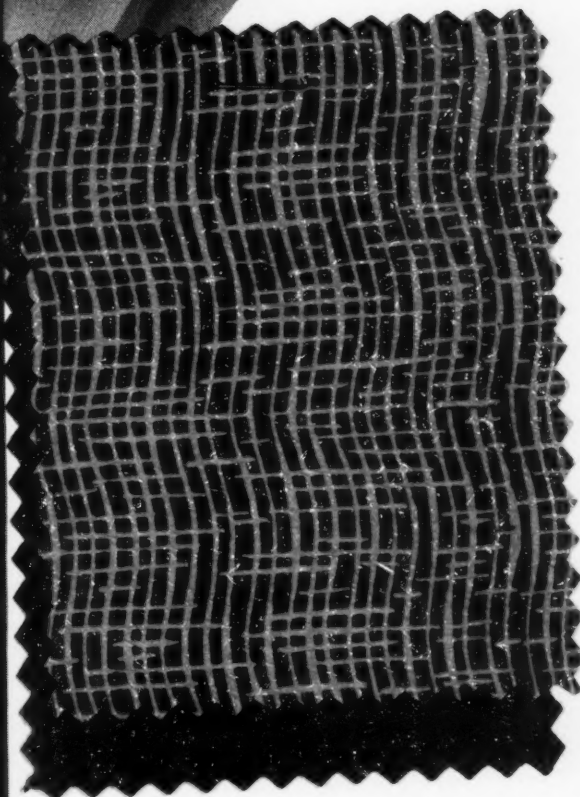
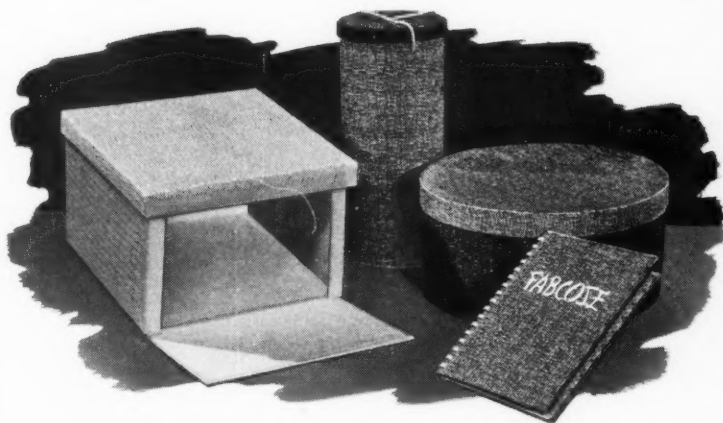
It can be cut, scalloped, sewn, pinked,  
pleated, glued, pasted, or cemented —  
with the greatest of ease!

It resists heat, cold, water, oils, alcohol,  
wrinkles, creases, and cracks.

It wipes clean with a damp cloth.

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# "See You at the Store!"



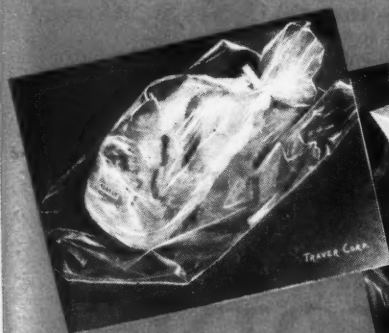
I'm MISS PEARLTON, Princess of Packaging Perfection. They call me that because my namesake, Pearlton Prime-Pac, is the wonderful new plastic "dress" that always receives a royal welcome from grateful shoppers.

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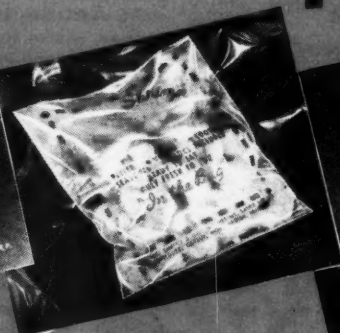


358 W. ONTARIO STREET  
CHICAGO 10, ILLINOIS  
WRITE OR WIRE—DEPT. M

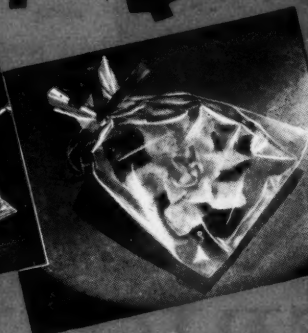
Ask for Household Utility  
Set at your favorite store



You can see but not  
touch choice poultry  
in durable Pearlton



Tantalizing shrimp already  
sauced—flavor protected  
in tasteless Pearlton



15 days, and the gar-  
denia is ice-box fresh  
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Without question, during the next few years the most important technical advances in the coating and impregnating of paper will be made possible by the use of American Anode latices and water mixes—if you will let us work with you on established products as well as new developments.

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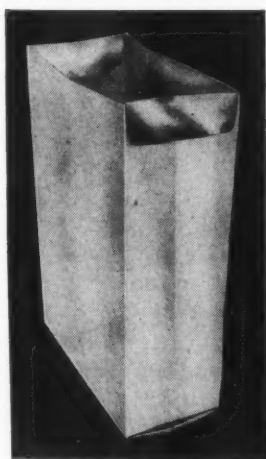


**T**he market-place was carefree...but not germfree.

Vendors' foodstuffs were laden with savory sauces... and breeding bacteria. This was the proving ground for epicures...and epidemics. Fortunately, Man's progress has conquered Man's plagues.

Today, maintaining the original qualities of a flavor-sensitive product until it is consumed is essential. Flav-O-tainer gives your product the protection it requires. ALL seams are heat welded for maximum security and durability, and prohibit germ-infestation, moisture-vapor, and oxidation.

If your product requires absolute protection plus the most potent of all selling influences—**CONSUMER ACCEPTANCE**—write today for the complete Flav-O-tainer story. It will answer your packaging problem!



## THE CORNERS ARE THE POINTS TO WATCH!

Each side of the Flav-O-tainer is indented vertically with a bellows fold... A patented cut-out at the top of each tuck exposes the liner. This liner when heat-sealed, fuses six separate surfaces into one solid unit. Result—a multiple sealing that neither moisture nor air can penetrate. Complete protection at the vulnerable points—the corners.

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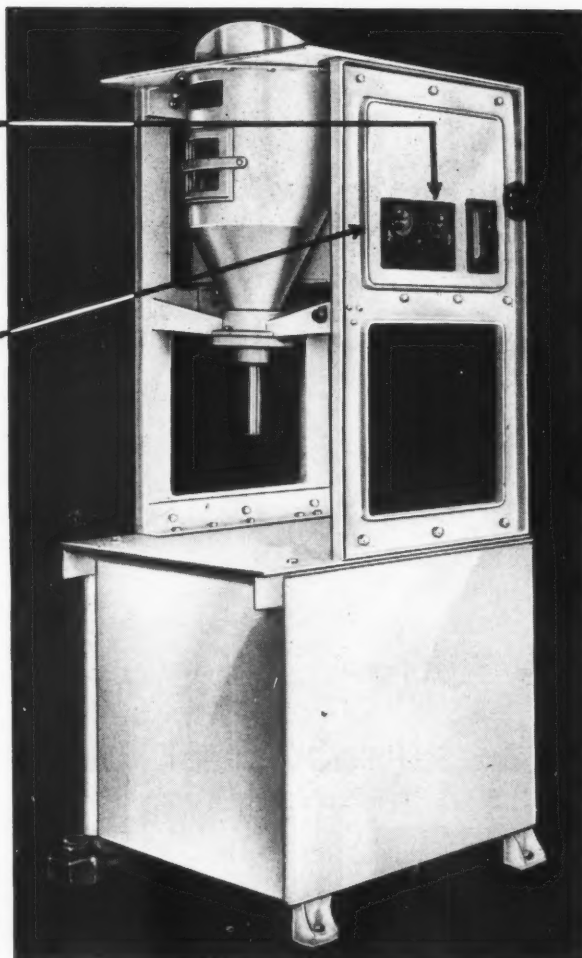
## *Designed by Cragar to fill your needs*

1. Simple dial adjustment controls package fill time. This allows accurate changes for any type of material. Auger speed is variable and independent.

2. Package transfer time can be easily set by a dial to accommodate the slowest or fastest operator.

3. The settings for both transfer time and filling speed are completely independent of each other. Cams are eliminated.

4. No clogging of bearings possible in filling because all mechanisms are above the auger and tube.



PATENT PENDING

Tested under actual factory working conditions, the new Rodgers auger-type Filler has proven its versatility. It will handle pulverized, granular, crystalline or paste materials. It fills all types of rigid or flexible containers. Operating safety is assured by emergency shut-off switch and complete housing of moving parts. The machine has a minimum of mechanical linkage. No tools are necessary to regulate the variables for a change-over.

The Rodgers Filler has a range from  $\frac{1}{3}$  ounce to 10 pounds, height is 79", floor space 29" x 36", shipping weight approximately 700 pounds.

If your product is packaged in cans, cartons, jars, bottles, bags, or envelopes, send us a sample and let us give you a practical demonstration.

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BAGS *positively*  
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WITH

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T.M. REG. THE GOODYEAR TIRE & RUBBER CO.

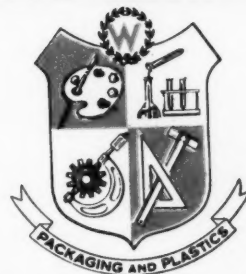
**BAGS**

- LIQUID-TIGHT
- MOISTURE-VAPOR PROOF
- EASY TO SEAL

*Remain Strong and  
Pliable at Freezing  
Temperatures*

More and more processors are coming to Western for Frozen Food Packages. Equipped with easily filled, easily sealed, square-type Pliofilm bags that remain strong and pliable at freezing temperatures, and with Western positively sealed, Liquid Lock Welded Seams, these containers provide better protection against product dehydrators.

Troubled with "leakers"? Consult Western packaging engineers on this and all other frozen food packaging problems.



Yes — we're talking about your package — the only salesman you have that reaches every customer and potential prospect. Your package is on the job throughout the business day making sales. There is little difference in cost between a good package and a better one. The difference is in the materials that make up your package, whether it is in the box stay that gives added strength and protection, in attractive coated or embossed or velour paper box coverings, in waxed papers, in laminated wraps or finely printed papers and cellophane. Why not put Nashua packaging materials on your sales payroll?

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# MODERN PACKAGING

VOLUME 20

DECEMBER 1946

NUMBER 4



PHOTOS, THE GLENN L. MARTIN CO.

*Typical consumer package for Glenmar Farms produce uses special board tray printed in green with transparent overwrap selected for physical requirements of vegetable. Output is close to 500,000 packages per month.*

## Glenmar Farms . . . grower and packager

**G**lenn L. Martin, the Baltimore aircraft manufacturer, has bet \$100,000 on the success of scientifically pre-packaged fresh produce.

That's his investment in a pre-packaging operation at Glenmar Farms, strategically located at Chestertown, Md., in the heart of the Eastern Shore vegetable-growing country, half-way between Philadelphia and Washington.

It's the first new plant, devoted exclusively to pre-packaging, to be constructed since the war and in the light of all the new information on produce packaging that has developed in the last two years. It has interesting new equipment for the cooling and preparation of produce for packaging, as well as specially designed packaging materials and machinery. Shifting seasonally from home-grown to shipped-in produce, it will provide a valuable comparison of the merits of grower-packaging vs. receiver-packaging.

Packages carrying the Glenmar Farms' name and

trademark are turned out of the plant at a rapid rate, and are currently supplying all Penn Fruit Co. supermarkets in Philadelphia as well as some retail outlets elsewhere. They are sold from refrigerated open cases in direct competition with non-packaged, non-refrigerated produce. Without any special promotion, the packaged produce is selling as rapidly as it can be supplied.

The interest of an aircraft manufacturer in produce

**A complete pre-packaging plant backed by a maker of airplanes becomes the proving ground for new theories of merchandising**

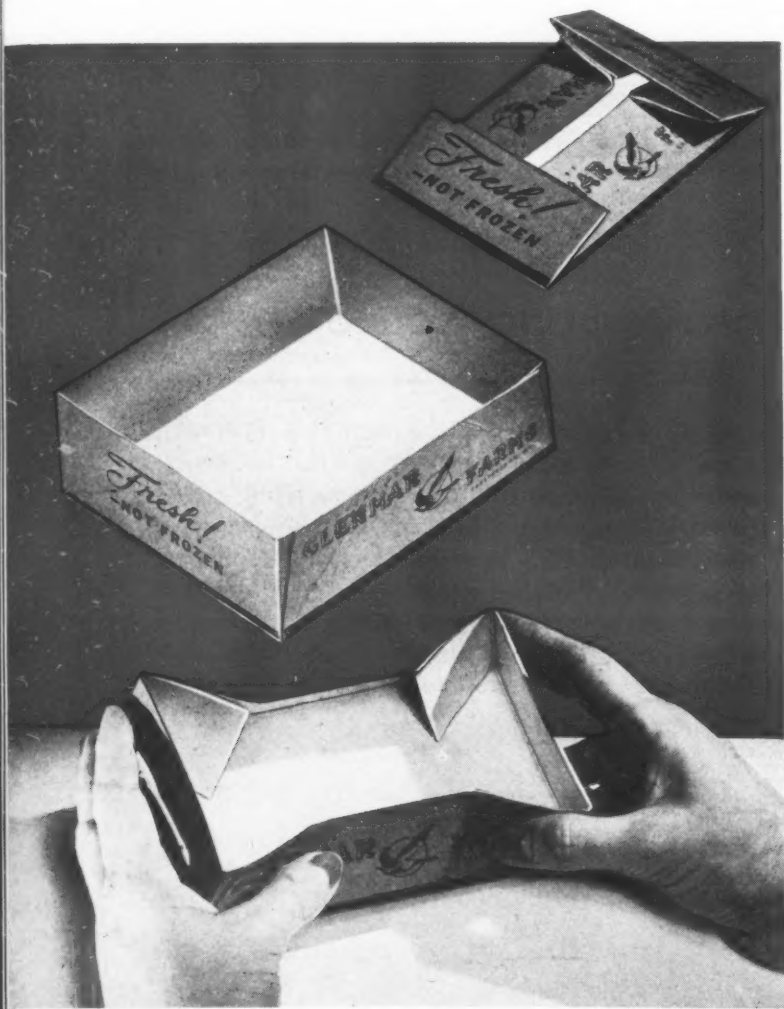
packaging is not as remote as it might seem. Glenn L. Martin is convinced that fresh produce will be the largest single item in air freight of the future, and he expects to build a lot of cargo airplanes. Glenmar Farms is frankly a pilot plant to explore and exploit the possibilities, and to develop information on the production, processing, packaging and distribution of produce suitable for air shipment.

Mr. Martin feels that packaging is all-important, as a means of assuring that vegetables reach distant markets with fresh-picked flavor and vitamin content intact. He is sincerely interested in seeing that all consumers get the benefit of fresh produce the year round.

"The airplane," Mr. Martin points out, "is admirably suited to meeting the problem of taking fresh vegetables from the rather narrow in-season production belt to the out-of-season market. Right now, the year round, about 95 out of every 100 Americans are deprived of certain fresh vegetables because they are out of season in their respective areas, and as a result they are missing much of the vitamin content which is available in garden-fresh vegetables."

Packaging, refrigeration and rapid transport together

*Tray of absorbent, wet-strength board, folds flat and sets up rigidly as shown. Note the packer's trademark and the emphasis on the "fresh—not frozen" theme.*



offer the means of remedying this situation, Mr. Martin believes.

"We found that there was so much to be learned about the handling and packaging of fresh vegetables," he says, "that we launched this project to see if we couldn't develop a method by which airlines could get garden-fresh vegetables to anybody, any place in the world."

Mr. Martin was admirably situated to conduct this research, based on the idea that produce should be cleaned and packaged as soon as possible after picking. For some years he had operated his Glenmar Farms, comprising several thousand acres of choice land, and under the management of A. L. Towson, Jr., it had become known for its high-quality produce.

About two years ago Dr. Frank App, the noted agronomist of Bridgeton, N. J., was brought in as a consultant, and conversations were started with suppliers of packaging materials and equipment. Last winter the purchase of machinery was begun and it was hoped to start packaging with the spring crops. However, due to various bottlenecks, the plant did not really start operations until the sweet corn crop came in in August.

During the summer and early fall the plant operated entirely on home-grown vegetables, 75% of which came from Glenmar Farms' own fields and the remainder from nearby growers. During the winter months it is planned to intercept refrigerator-car and truck shipments from Southern points so that the plant may be kept operating and dealers supplied all year.

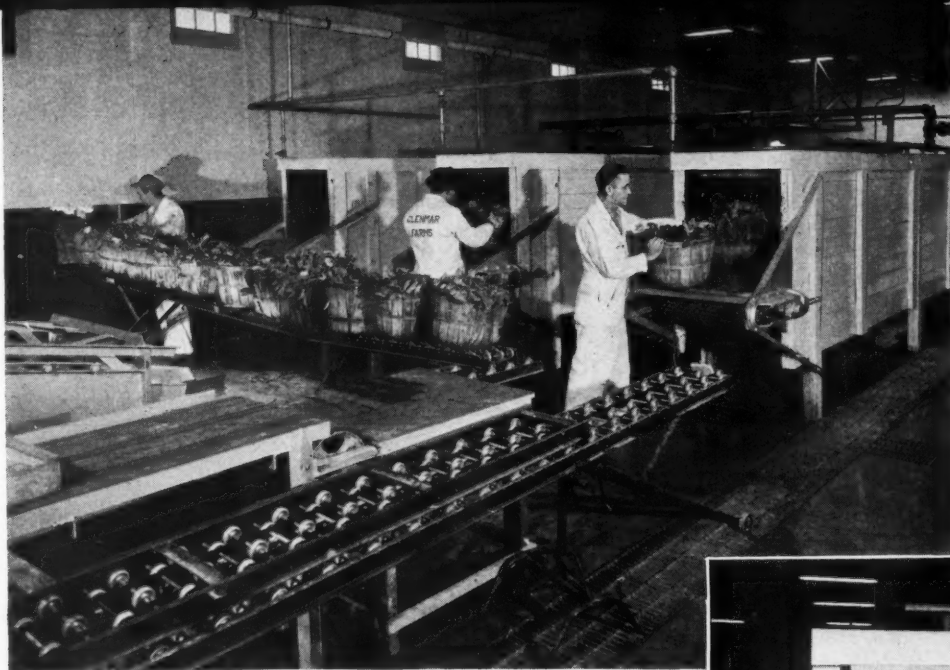
So far, the Glenmar line has included snap beans, lima beans, corn, broccoli, spinach, tomatoes and cauliflower, all of which have been packaged and sold with great success. Peas and asparagus will be added later.

The package is similar in appearance to that used in other pre-packaging operations—a folding paperboard tray which is readily set up, filled with produce, and machine-overwrapped with transparent film. The tray (Page 94) might be described as the Britewood type of in-folded, stay-up tray. It is all-over printed on the outside in two shades of green, bearing the Glenmar Farms' name and trademark (a flying goose) on the side panels and the explanation "Fresh!—not frozen" in bold lettering on the ends.

Considerable thought and experimentation went into the selection of the board for the trays. This problem was assigned to the Container Corp. of America, which was in on the Glenmar development from the start.

Mr. Towson, the Farms' manager, was aware of the fact that the condensation of moisture on the inside of the package had been a major problem in other pre-packaging operations. He was aware also that it was necessary to retain a certain amount of moisture inside the package to keep the produce from drying out and losing weight. His idea was to use in the tray a board which would act more or less like a blotter to absorb moisture and hold it as a reservoir against the eventuality of any dehydration of the produce. If the condensed moisture were attracted to the board, it would





*Three specially-built 30-ft. conveyORIZED tunnels wash and chill produce to 40 deg. immediately after picking.*

*Looking into one of the pre-cooling tunnels from the discharge end, as trays of tomatoes come off the conveyor.*

be less apt to collect on the under side of the film and fog the transparency of the package.

This obviously called for wet-strength-treated board. The material finally evolved by Container Corp.'s laboratories is described technically as a low-immersion, wet-strength board, designated as No. 250 water-immersion board. It is similar to the board used in the Army's Ration K package. According to Mr. Towson, it has functioned very satisfactorily.

Glenmar Farms is also very conscious of the fact that no one film is perfectly suited, protectively, to the wrapping of all types of vegetables. At present most packages are being wrapped with MSAT, LST and PDS cellophane.

Condensation of moisture inside a package occurs when the package, somewhere along the distribution route, is subjected to a rapid change in temperature. Glenmar Farms hopes to avoid this by starting with the temperature very low at the packaging plant and gradually increasing in very slight degree through the successive distribution steps.

The key to the entire Glenmar operation is immediate chilling of the produce in a 40-deg. ice-water bath as soon as it is brought into the plant from the fields. Built to Glenmar specifications are three pre-cooling tunnels, each two feet square inside and 30 feet long. Inside the tunnels, sprays produce wash water for five feet and chilling 40-deg. water for 20 feet as the produce moves through in baskets on a conveyor belt adjustable to speeds of one to five feet per minute. The last five feet of the tunnel are for drainage. These tunnels take care of virtually all varieties of produce except spinach, which goes through a special washing and pre-cooling machine.

Most vegetables are packaged immediately after leaving the pre-cooling tunnels, but in the case of spinach it has been found advantageous to store it overnight in the big 12,000-cubic-foot cold-storage room, where a constant temperature of 40 deg. is maintained. This refrigerator room is another vital factor in the Glenmar operation; it is used to protect the low temperature of



the produce whenever there is a lag in movement, either before or after packaging.

The first principle of a successful pre-packaging operation is to package only thoroughly cleaned, carefully selected produce. The handling of spinach—a big-volume item—is typical of Glenmar methods.

Spinach is cut above the ground and is brought into the plant in bushel baskets, which move from the unloading dock into the preparation room on a conveyor belt. The spinach leaves are immediately spread on a continuous wire-mesh conveyor, where they are picked over by women attendants who discard any substandard pieces. The spinach is carried along on the belt to a special washer consisting of a large tank filled with cold water, over which are suspended eleven paddle wheels mounted in three rows. The paddle wheels push the spinach under the water and also direct the water and the spinach toward another belt which picks up the leaves and carries them under a series of four water sprays. This repeated subjection to water under pressure removes the last bit of sand and grit from the spinach, and it emerges at last on another conveyor belt where it is given a final inspection. Any leaves which may have been bruised during the washing, or any defective pieces missed in the first inspection, are removed.

The spinach is returned to baskets and removed on



*Spinach has special cleaning and preparation line. Here leaves are spread on conveyor for preliminary culling.*

*(Below) Entering from right, spinach is pushed through tank of ice-cold water by 11 paddle wheels; proceeds on up conveyor to spray washing.*



*Emerging from the last of spray-washings, the spinach falls into boxes in which it will be stored overnight in refrigerator rooms for additional crisping. Constant and careful culling removes all imperfect leaves.*

trucks to the cold-storage room for overnight chilling and crisping.

The procedure for other vegetables is similar except that they are routed through one of the cooling-and-washing spray tunnels rather than the special spinach washers, and go directly from there to the packaging line.

In a separate room there are two packaging lines, each built around an automatic wrapping machine. These machines are rated at a capacity of 25 packages a minute each. Eventually it is hoped to link these lines to the preparation lines, so that it will be a continuous conveyORIZED operation, but at present the baskets and boxes of produce are trucked into the packaging room.

Filling and weighing of the trays varies according to the type of product. For spinach and most other vegetables it is a simple hand operation. Girl operators set up a tray in a single, simple hand motion, fill it with produce and check the weight on scales. A small paper folder telling "The Story of Glenmar Farms" and a label identifying contents, weight and price are placed loosely atop each filled tray.

Originally, filling was done at a table adjacent to the start of the conveyor which takes the packages into the wrapping machine. A girl operator transferred the packages by hand from the table to the conveyor. This is a U-shaped line which takes the packages into the wrapper and out again at the same end. This setup is now being changed to a straight assembly line, with a check-weighing operation to insure that stated weights are met.

As it enters the wrapper the tray slides onto an elevator which lifts it against the cellophane, fed from a roll at the side. The cellophane is cut automatically at the proper point and folded down at the ends and under the tray. The package then moves off the elevator into a heat-sealer which seals first the bottom folds and then the ends.

A single machine attendant inspects the packages as they come out of the machine and packs them in master cartons, which are moved directly, as soon as filled, into the cold-storage room.

"We are constantly changing and improving on our technique," says Mr. Towson, "and some of the machinery we first started to use will soon be outmoded."

We do not believe that the ideal equipment for produce pre-packaging has yet been evolved."

Corrugated cartons are used as shipping cases. These are moved from the refrigerator room directly into refrigerated trucks which take them to the retail outlets. On unloading at the store, no time is lost in getting the packages into the refrigerated display cases or into reserve cold-storage space. At this point, temperature will have been raised to about 45 deg.

At the Glenmar plant special preparation equipment is used for certain types of vegetables. There is, for instance, a pea huller, which is used to remove both peas and lima beans from their pods. These vegetables are thus presented to the housewife ready for the pot. A hopper-fed filler is used to fill lima beans, peas, and other free-flowing small vegetables into the trays, which are then check-weighed. A machine cuts the ends off snap beans before they are packaged, saving the housewife this operation.

There is no substitute for the hand operation on cauliflower, which is carefully trimmed, cut into small sections, and arranged in a shallow tray.

Tomatoes come in from the fields in shallow trays, which convey them through the cooling and washing tunnel. Tomatoes are packaged three or four to a tray, and are over-packed in shallow corrugated folding cartons colorfully printed with the brand name and trademark and the reminder that these are "farm-ripened" tomatoes.

All consumer-unit packages are stamped on the bottom with a code symbol which designates the day on which they were packed.

The merchandising approach of Glenmar Farms shows an awareness of the necessity for educating the consumer to the specific advantages of packaged fresh produce as against its two principal competitors—frozen produce and bulk fresh produce. The package itself stresses that this food is "Fresh!—not frozen." The insert folder, which measures 3 by 2 1/4 in. and is printed in green and black, says:

"This produce is vine-ripened and harvested at the

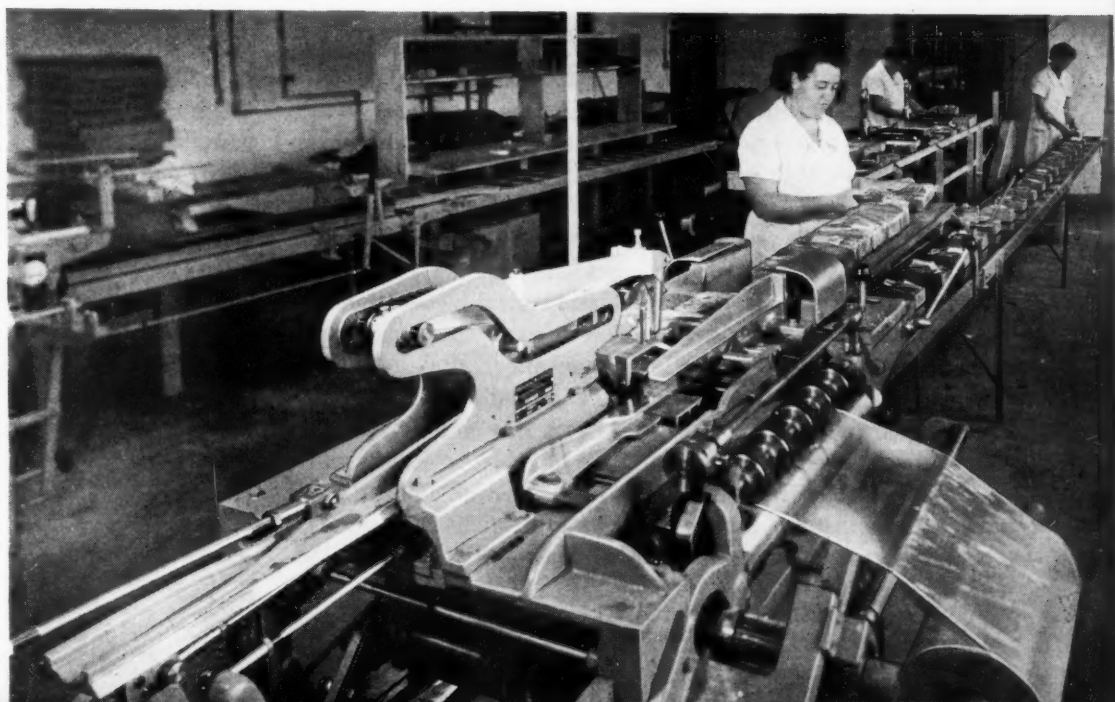


(Above) Baskets of both peas and lima beans are dumped into this machine for hulling prior to being packaged.



(Above) Whiz packer is used to fill trays with free-flowing small vegetables such as lima beans, peas and cut snap beans. The weight of each box is checked on scales.

From weighing station (center, rear), filled trays move on conveyor into machine which automatically measures, cuts, folds and heat-seals cellophane overwrap. Woman in foreground is removing completed packages to skid which will move them promptly to cold-storage room. This is one of two identical packaging lines, with combined capacity of 50 packages per minute.







(Left) Tomatoes are packed one-deep in specially printed folding corrugated cartons. Note the copy emphasizes "farm-ripened" theme.

(Right) Interior view of 12,000-cu. ft. cold storage room at Glenmar Farms where packaged and unpackaged produce is kept at constant 40-deg. temperature. Packaged produce, in corrugated cartons, move from here directly into the refrigerated trucks ready for delivery.



peak of its goodness. The produce is trimmed, washed, pre-cooled and packaged—then delivered to your market under refrigerated conditions, thus preserving all the nutrients possible. . . .

"All Glenmar produce is ready to cook—no preparation necessary. You do not buy waste—only edible food. Actually costs less per pound of edible food."

This forthright selling job is a distinct advance over other pre-packaging operations in which little or no attempt has been made to merchandise the idea.

The immediate objective at Glenmar Farms is a steady production of 500,000 packages a month, which is the virtual capacity of the present equipment based on an 8-hour day. This will be approximately 250 tons of edible produce per month.

As capacity is increased further, air shipments to more distant points will be started. As a starter on the specific problem of air transportation, it is possible that Glenmar will do some winter packaging of Texas and Florida crops.

Manager Towson estimates that the limit of practical delivery by truck from the packaging plant is a radius of 200 miles. Beyond this distance, problems of delivery cost and possible deterioration of the packaged produce due to the delivery time arise. Beyond 200 miles, therefore, the airplane is expected to be the best delivery vehicle.

The objective is a full line of produce—possibly including some fruits—the year round.

The Glenmar management is still open-minded on the controversial question of whether unit packaging is

best done at the growing point or at some intermediate point nearer the ultimate market. A plant like that at Glenmar Farms represents a considerable investment and for utmost economy it should be kept operating the year round. It may be that the present operation will set a pattern. When the home-growing season ends, selected Southern crops can be graded, trimmed, culled and pre-cooled in the South and then simply placed in insulated bulk containers for air shipment to Chestertown, which will function only as a packaging and distribution point.

This method would obviate paying freight charges on the culled portion—which may run from 25 to 75% of the crop, averaging one pound out of every two harvested. And it is believed that it would still permit the packaged produce to reach the market in Philadelphia, Washington or New York within a safe 24- to 36-hour period after harvesting.

It would have the very great advantage of permitting a packager like Glenmar Farms to promote its brand name on every package produced, the year round—a practice which every packager knows is of ever-increasing value as a reputation is established, distribution widens, and the sales curve inevitably climbs.

CREDITS: Trays and corrugated shipping containers by Container Corp. of America, Chicago, Ill.; cellophane by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and the Sylvania Industrial Corp., New York, N. Y.; wrapping machines by Hayssen Mfg. Co., Sheboygan, Wis.; (Glenmar Farms wishes it understood that this listing of materials and equipment in use now does not necessarily imply an endorsement).



New Kroger family label replaces 49 private brands that will disappear from Kroger shelves by end of year.



## Kroger labels . . . new force for a private brand

A significant trend in chain store merchandising is indicated by the Kroger Co.'s announcement that it has put 49 of its own private brands in quality grades under one Kroger label.

Such concentration on single-brand promotion has been one of the greatest factors in the phenomenal success of famous-named cigarettes, breakfast foods, soups and soaps, ever since packaging has made such brand promotion possible.

There are few outstanding examples, however, among the merchandisers of private brands. Such special labeling came into use during the thirties as a tool to beat down prices. Or it has been used to designate fancy grades or special quality lines in cases where it is

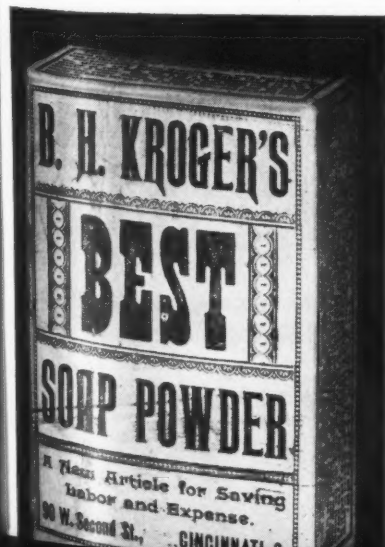
believed a wide variety of labels aids sales. If such brands have received wide consumer acceptance, there has been little attempt to bring the privately labeled merchandise under a family name.

Continued growth of the self-service market and anti-chain-store legislation were cited among the important reasons for the Kroger program of standardizing its private brands. In today's market, the private brand must sell itself by its package on store shelves. No clerk is there to suggest the store's own brand to the customer. Traditional buying advantages of the chains through discounts and advertising allowances are being reduced and chains are aware that they will have to rely more heavily on merchandising methods than price.

Kroger made the decision to adopt the one-label policy a year and a half ago after many meetings with branch managers. A leading designer was commissioned to pattern the new trademark.

Such special names as Country Club for coffee, Clock for bread, Sudan for spices, Latonia Club for beverages, May Gardens for tea will disappear about the first of the year. Kroger designation for lower grades, which the company is reluctant to associate with the new labels, will be continued, but even these, it is believed, may eventually be replaced by a family label program.

Basic color scheme of the new labels is a high-visibility blue with the name Kroger in eye-catching white lettering. The name and (Continued on page 174)



B. H. Kroger, founder, put his name in bold type on first Kroger private brand. Program concentrates on merchandising value of well-established name.



# What IS packaging cost?

In the period that lies immediately ahead, if current signs can be relied on, every element of cost is going to be the object of severe scrutiny—and packaging will come in for its share. This is not only because the lush days of war production and war activities are over, but also because price curves of materials and labor are forcing manufacturers to study costs in every department of their organizations.

Of recent years, there has been comparatively little disposition to question the economic values of packaging per se. No one has had time for quibbling, because all industries and military procurement agencies have experienced an imperative need for packaging regardless of cost. Consumer organizations remained silent, though some of them had previously been very vocal in their condemnation of packaging, which they accused of creating fictitious values. A serious approach was made to the problem of the economics of packaging when one of the well-known universities, under a subsidized grant, undertook a study of packaging costs.\* The conclusions reached, however, left something to be desired because of the limited ground covered, because the intangible but no less *real* values of packaging were not weighed, and because the "costs" that were investigated were not at all typical of standardized and mechanized packaging operations.

Anyone who attempts a serious study of packaging cost and the elements that enter into it will find little published material to reward his search. The cost question is constantly being raised—now more insist-

ently than ever—but it is difficult to arrive at concrete answers. There are obviously certain definite elements or factors that comprise packaging cost. These may differ in degree of importance or dollar volume represented from one business to another; but it is equally obvious that a discussion of the principles underlying those elements would be helpful to practically every line of business. Therefore, in an effort to obtain a composite picture of current practices with respect to those elements, the editors of MODERN PACKAGING wrote to a carefully selected list of executives in various lines of business, asking the basic question "What Constitutes Packaging Cost?" This article is the result of an analysis and a synthesis of the many thoughtful replies received.

It is apparent that comparatively few companies segregate packaging expense as a separate cost in their accounting systems. This may possibly be due to a rather widespread belief that all packaging expense should be charged to the finished product; but it is just as likely to be traceable to the idea that many of the elements in packaging cost defy clean-cut accounting analysis. And yet if it were possible to arrive at a comprehensive list inclusive of all the elements of cost that enter into package planning and package production, it should then be easily possible to segregate these costs—and many obvious advantages would accrue from the process.

Packaging goes through three phases, each with its distinctive elements of cost differing somewhat from those in the other phases.

The first of these phases is package planning, re-

\* *Package vs. Bulk Handling Costs* by Dr. Ralph Breyer, Professor of Marketing, Wharton School of Finance and Commerce, University of Pennsylvania, MODERN PACKAGING, December, 1943.



search and development. Obviously, during the development stages, package costs are inordinately high compared with normal operations. How should costs be computed during this period and how should they be treated from an accountancy point of view?

A second aspect involved is the procurement problem, applicable both to the development stage as well as the stage of normal operations; while a third aspect is concerned with the problems of the packaging line in normal production and involves such routine operations as forming, filling, closing and loading for shipment.

Under each of these three aspects, there are many elements that enter into the determination of true packaging costs.

#### Development costs

Applicable to the first phase, according to current practice and opinion, a list would include the following:

1. Selection and testing of materials for experimental purposes.
2. Costs of such materials.
3. Overheads related directly to the package planning or development department, adjusted on the basis of time expended.
4. Brand name and trademark registration and other legal expense.
5. Art work, design costs, advertising copy service pertaining to packaging.
6. Initial costs of plates, patterns, molds or dies.
7. Market research and testing to determine consumer package preferences.
8. Overheads pro-rated or allocated from other departments.

In larger organizations, it appears to be quite possible to segregate such items as are related to package development work represented by the foregoing list, in order to charge them to appropriate accounts. But it doesn't seem to follow that this is a common practice. Certain companies appear to dispose of some of these development expenses by tossing them blithely off as expenses incurred by their advertising agency. It should be pointed out that in reality such a practice means that all package development expenses thus become a charge to advertising. Unquestionably, some package development work is a legitimate charge to advertising, but to allocate it all to that account seems to be a bit of thinking just as loose and ill considered as to charge all package planning to general overhead or to charge it all off to promotion expense.

Precise thinking would distribute the charges to several accounts—that is, to a package research or development account, to the advertising account, to legal expense, and to promotion expense. Taking each of the eight items listed above, then, it would seem to be sound practice to handle them as follows:

Charge to package research or development account:

1. Selection and testing of experimental materials.
2. Costs of experimental materials.

3. Direct overhead for package planning.

Charge to legal expense:

4. Registration of brand names, trademarks and other legal expenses.

NOTE: Trademark and brand name registration may be treated as a capital expense, thus permitting it to appear as an asset on the balance sheet.

Charge jointly to package research and to advertising:

5. Art work, designs and advertising copy preparation.
6. Initial costs of plates, patterns, molds or dies.

Charge to promotion expense:

7. Costs of determining consumer package preferences.

Overheads from other departments (item #8 above) will automatically be distributed over the above accounts.

It should be remembered that rightly considered package planning is a project that calls for teamwork among all departments of a business. Whether or not there is a formal committee or an organized procedure, a certain amount of reviewing by various departments is highly desirable. It would be splitting hairs with unnecessary minuteness to try to put this reviewing and consultation on a cost basis. Item #8 should cover this point.

*Can all packaging cost be charged to finished product?*

The Purchasing Department performs important procurement functions in connection with packaging costs. It is obvious that the burden on the Purchasing Department can be heavier for work in the development stage than for normal operations. The service performed then by the Purchasing Department may be entirely out of proportion to the dollar volume of purchases. If the operation is very extensive, the practice of letting the general overhead of purchasing carry the load can be very misleading in computing development costs. It would seem, however, that in most instances while it might be possible to draw the line very sharply and thus produce accurate accounting results, nevertheless, those results might hardly be worthwhile. Over a period of months, the general distribution of Purchasing Department overhead would provide reasonable accuracy.

For normal operations, the distribution of overhead expenses calls for sharp and accurate thinking. Companies with minutely divided accounting systems may accumulate all costs relating to packaging under the Packaging Production Department. These costs would include as major classifications the following items:

A. *Containers:* Purchase price and inward freight of cartons, partitions, collapsible tubes, metal cans, bottles, shipping containers—in short, *all* packaging



materials. (Some concerns add shipping room supplies to this list.)

**B. Direct Labor:** All wages for preparatory operations (such as bottle washing, etc.) and the operations of forming, filling, closing or capping, labeling, cartoning, wrapping, inspection and loading in containers.

**C. Overhead Charges:** (Directly related to packaging)

- (1) Salaries of supervisors and clerks.
- (2) Pay for sick leave, holidays and vacations.
- (3) Wages for re-labeling or re-cartoning.
- (4) Wages for materials handling.
- (5) Wages for maintenance of equipment, including machine set-up, size change-overs, etc.
- (6) Supplies requisitioned.
- (7) Power, fuel and water pro-rated for the department.
- (8) Depreciation based on life expectancy of the equipment.
- (9) Workmen's compensation and group insurance; pay roll taxes.
- (10) Container control: Cost of inspection of container materials received, to check quality specifications, etc.

In addition to its own overhead burden, the Packaging Department or the cost of packaging must carry its share of general overhead. Accurate determination of packaging cost, therefore, will take into consideration the following general overhead items applicable in normal operation:

### *Is there a proper percentage for package costs?*

**Purchasing:** A percentage of the cost of operating the Purchasing Department, pro-rated according to amount of time spent on package procurement.

**Production Planning:** Pro-rated similarly to Purchasing Department.

**Industrial Engineering:** Pro-rated similarly to Purchasing Department.

**Rent:** Pro-rated according to floor space occupied.

**General Insurance and Taxes:** Pro-rated in proportion to capital investment of the Packaging Department.

**Receiving and Storage:** Pro-rated according to weight of packaging materials handled compared with the factory's total weight of supplies.

**Repairs and Maintenance:** Charged on basis of time work as reported on job cards.

**General factory overhead:** Pro-rated according to number of employees.

All equipment should be regarded as a capital expense, and its cost—which, of course, includes installation charges, whether inside or outside personnel is used—may be written off over a period of time.

In passing, it should be noted that there are two types of material which through inaccurate thinking are sometimes charged to packaging, although they are legitimate advertising expenses. One of these is the package insert. This is by no means a packaging expense—indeed the shoe might fit the other foot; that is, the Packaging Department might reasonably charge the Advertising Department for the extra expense of putting inserts into packages. The same principle might apply to display materials packed with the product. One company, at least, sharply segregates these charges, absorbing the handling cost, but the materials themselves are charged to advertising.

*Do not saddle packaging  
with burdens  
it should not carry!*

What happens when, due to varying quantities ordered, there are wide differences in costs of packaging materials? For instance, an introductory lot of perhaps 10,000 cartons might be ordered for market testing. Later, when distribution was accomplished, a normal year's supply might run to several million at a considerable decrease in cost. Obviously, the excessive cost of the introductory lot should be charged to something other than package costs. In actual practice, accountants differ. Some say the difference should be a charge to development work or package planning. Others say it is rightfully a charge to advertising or sales promotion. A charge to sales promotion seems to be the most logical.

#### **Basic considerations**

In the last analysis, and apparently in the majority of cases, the complete packaging cost is a charge against the specific product—which is as it should be. In reality, product and package comprise a unit, and the selling price must include not only the product itself but also the costs incurred in getting it to the user. In the carefully thought-out cost system, all such items will find their way into the factory cost for the given product.

But it should be made possible, under a modern packaging cost system, to segregate charges for ingredients and product processing as distinct from those for container material and packaging operations. If a reason is needed to justify this statement, here is a cogent one:

If management learns that a certain product is incorrectly priced from a competitive point of view, an adjustment of necessity must follow. How much of this adjustment can or should be made by means of changing the packaging costs? Just what elements

are costing too much or too little? How far and in what direction can the company safely go in making changes?

It is not the purpose of this article to answer those questions; the foregoing discussion of principles should point to elements or cost factors that might be investigated to find the answers—and the correct answers depend on proper allocation and accurate records.

Neither does this article make any attempt to answer the question, often asked but so far never answered, "What is the proper percentage for packaging costs?" The answer depends, at least to some extent, on the line of business; even in the cosmetic industry, where the ratio of package cost to product cost is higher than in most other lines, there are many variations from anything like a uniform pattern. In the food line, margins are uniformly short, turnover is rapid and competition is keen—but there is little likelihood of finding uniform percentages of cost.

A comparison of the packaging costs of a bottled table dressing with that of a carbonated beverage will serve to illustrate the point. Each package consists of glass container, label and cap or closure, and—even

allowing for re-use of the beverage bottle—the absolute material costs are not far apart and the production operations are probably reasonably close together also. But the table dressing sells at 35¢ to 50¢ in comparison with 5¢ to 10¢ for the carbonated beverage. In the one case, the package cost may not be more than 5% to 10%; in the other case, it is perhaps 40% to 60%. In neither case, is there any over-packaging; in both cases, principles of package economy have been observed; but in one case, it simply takes a higher percentage of package cost to deliver the product to the consumer in usable form.

### Two fundamental rules

In the absence of hard and fast rules for proper percentages of package cost, each individual company must determine for itself what the correct ratios are. But if true packaging costs are to be determined, here are two "MUSTS" for making computations:

1. Include ALL elements properly chargeable to packaging.
2. Do not saddle packaging cost with burdens it should not carry.

## The White family . . . united after 70 years

Two objectives considered paramount in importance by the White Sewing Machine Co., of Cleveland, Ohio, when recently undertaking to redesign its packages were: (1) the creation of a good merchandising design suitable not only for packages but for certain display materials and (2) the development of a family association with modern, arresting packaging.

A conglomeration of disassociated packages of various designs and colors had accumulated in the more than 70 years of the firm's existence. Almost every White part had a different looking package. The new packaging had to unify all of the firm's products and take advantage of the well-known White name—tradition in the sewing machine industry.

Through subtle adaptation of the trademark and basic coloring which had become associated with the White products during the firm's long existence, the new packaging achieved unification and a design which provides recognition value for the company's products.

Basic colors long used by the company are yellow, blue and white. The White oval trademark has been publicized for over half a century. The designers, therefore, decided upon an over-all background of yellow, blue and white striping. Messages and item illustrations are in blue and black, and the well-known White trademark appears on the sides. The up-to-date design of the new packaging provides family association, quick identification and eye appeal.

Four White items are now being marketed in the new packaging, and the same design will be used for all other products in the near future.

CREDITS: Design, Manning's Studio, Cleveland, Ohio. Printing, Great Lakes Box Co., Cleveland.



# Plastics with velvets . . .



COLOR PHOTO, CATALIN CORP.

Objections to plastics as too stark or too modern for re-use jewelry packages have been overcome by box makers who combine plastics with traditional fabrics used for such packaging. These polystyrene containers have inside pads of satin, covers cushioned with velvet. Open construction or supporting cross pieces for lids saves plastic material. Pads are removable for re-use of boxes as jewel cases.



# build acceptance for jewelry packages

Jewelry is very adaptable to luxury package presentation, but the jewelry trade has lagged behind the makers of pen and pencil sets, perfumes and cosmetics in bringing its products to the consumer in package settings matching the elegance of the product or bearing the trademark of the maker.

Up until the first World War, the finest watches were packed in tissue paper for sale from the jeweler's drawer upon the traditional purple or black velvet counter pad. Usually he had his own store boxes, cardboard or leatherette covered and lined with satin or velvet and imprinted with his store name, which he supplied with a purchase. Such boxes were sold quite generally throughout the jewelry trade to retailers who bought boxes in which their products "fit." These boxes, however, did not carry the name of the maker of the watches or other jewelry and, oftentimes, there was no way to know the name of the jewelry maker.

It was through the foresight of the Bulova Watch Co. that specially designed boxes were first used on a wide scale as trademarked packages supplied by the maker. Bulova's experiment with a fancy box was an outstanding success and showed excellent sales results. Competitors were compelled to provide similar packages and many companies began adventuring into luxury packages of cardboard, metal, wood and, more recently, of plastics. Today, some sources say not a single watch is sold for re-sale without a package.

Success in the watch field led makers of simulated pearls, rings, bracelets and costume jewelry to adopt packaging practice slowly. There is still much opportunity for expansion of packaging in this field, but even so there is not a single product in the jewelry field which has not been packaged in a trademarked box of one type or another by some manufacturer. The fact that excise tax figures for the year ending June, 1946, show that Americans spent more than one billion dollars for jewelry in that year gives some idea of the possibilities for packaging materials in the jewelry field.

Manufacturers of plastic boxes have had a wide influence in the development of jewelry packaging during the past year, since such containers now can be manufactured in large quantities.

Plastics were not embraced immediately, however, by the jewelry industry. Seasoned jewelry men objected to it first as too stark and too modern. They were accustomed to velvets and satins as the traditional setting but it was not until a smart box manufacturer began eliminating these objections by combining plastics with lush fabrics that resistance was broken down. In addition, the makers of these plastic boxes are planning jewelry packages to meet merchandising and sales needs of the product and are supplying the supplementary packaging, such as outer paper cartons, display fea-

tures, etc., as a complete package service to the jeweler.

Conspicuous examples are shown in the illustrations with this article. For the current holiday season, several important jewelry manufacturers each will be using from a half million to a million of such boxes.

One of these important users is the Speidel Corp. of Providence, R. I., for a line of children's jewelry. The plastic, velvet and satin box is a feature of this company's national and trade advertising and, it is said, has gained display on a wider scale than any previous children's jewelry line. The box is a two-in-one jewel box

*Spiral arrangement in the pad provides an interesting display idea for pearls. The box has polystyrene cover.*



*A modern red and black box is used for Crawford watches. When pads are removed, box becomes useful cigarette box.*



for little girls, known as "Miss Mignon." It will hold either a bracelet or child's necklace. It is made in two pieces of a polystyrene material in ivory color molded in a six-cavity mold—three tops and three bottoms. On the first boxes the legs were not reinforced, but to insure sturdier wear on the present boxes they are reinforced with a tiny triangular piece which was added to the mold. The early boxes were made with a pin hinge, but the hole through the styrene was difficult to make. The company now uses a patented spring hinge, snapped on from the back and opening far enough to give a good view of the jewelry. The box parts come finished from a polished mold ready for assembly. The top pad outside the box is pink velvet; the top one inside, pink satin with the trademark stamped in gold. A velvet platform inside with collar holds the necklace or bracelet in place. The plastic container is supplied to the jewelry firm in a paper set-up box covered with a "bubble" designed paper—pink and blue against a blue background. After the little girl receives the package, she can re-use the plastic box as a jewel case.

L. Heller & Son has adopted a larger ivory polystyrene box of similar construction for Deltah simulated pearls. This box is also made in two pieces. The base is produced in a 2-cavity mold; the top in a 4-cavity mold. Separate molds are used because the bottom is much thicker than the top. The cover was designed with an open top and was supported by two cross pieces. The entire center section composed of a  $\frac{1}{4}$  in. rim running around the inside of the cover and the two cross pieces were depressed below the level of the upper portion of the box so that the velvet padding, when placed in position in the cover, would be level with the top of the box. Small diameter holes are

molded in each triangular shaped leg, thereby reducing the thick section of the leg and helping to eliminate sink marks. The bottom of the box has three compartments so that when the pad is removed, it may be used on the dressing table to hold other jewelry.

Another variation of the jewelry box with plastic lid is used for Marvella pearls. An interesting spiral display arrangement in the pad for the pearls provides an intriguing idea, not only for window display, but for the shopper and recipient of the package.

Modern lines were chosen for the box developed for Crawford watches. This box has a top of red styrene and bottom of the same material in black. Full advantage is taken of the luster of the plastic and a gold seal is stamped on the red lid. The inside protective pad may be removed from this box to convert it into a cigarette box. The cut-out sides enable the jeweler to display the watches more effectively and also make reaching for the cigarettes easier. Each of the two parts of this box is made in a 6-cavity mold. Another unusual feature is the slot molded at the right in front for a price tag. The company has designed die-cut gold-stamped transparent acetate price tags for this purpose.

The collar to hold the watch is adjustable so that it will accommodate any size watch which may be tilted in the box for better display.

Quite another problem of packaging was required for a new line of basket-weave and dangle jewelry distributed by Jacques Kreisler, an early user of decorative jewelry packaging. This package had to be one suitable for use as a display stand. This was accomplished by producing a satin-covered oval base, trimmed with silk cord. Transparent acrylic sheet is then fabricated into a tiny stand and bolted to the base so that the clips, earrings and bracelet can be secured to the transparent stand for display of the jewelry. The satin base is stamped in gold with the Jacques Kreisler name, and set-up paper boxes complete the packages.

A variation of this type of package has been made for Defender Watch Co. Here the display stand is an acrylic base over which is placed a two-step platform covered with velvet. An acrylic rack to hold a watch is bolted through the base. This display unit also serves as the base of a gift box. The lid is paperboard, covered with an all-over embossed printed paper.

All these packages are designed from blueprint stage to align them with the requirements of the product and the manufacturer's merchandising objectives. Sketches are made to give general proportions and design. Actual samples of the plastic boxes are made of acetate material, carved, assembled and polished to simulate the finished piece. A model of the outer paper boxes is also made to show the client exactly how the finished package will look. Polystyrene material has been found most satisfactory for these boxes because of its relative stability to heat in window displays.

CREDITS: Boxes, Braun-Crystal Mfg. Co., Middle Village, New York. Material for plastic boxes, Loalin, made by Catalin Corp., New York. Velvets, A. Wimpfheimer & Bro., Inc., New York. Satins, Celanese Plastic Corp., New York.

(Page 106)

*Acrylic racks bolted to satin-covered oval bases form packages and display pieces for Jacques Kreisler jewelry. Defender Watch Co. adopts similar idea for watches. Gold printed set-up boxes complete these new packages.*







*Above. Dispenser is housed in platform set-up box, against crimson background, with transparent acetate lid.*

*Left. New container is a golden sphere. Perfume, held under pressure, is atomized by flick of the finger.*

## Pressurized perfume...an aerosol package

One of the outstanding developments in perfume dispensers since the invention of the atomizer marks the entrance of Daggett & Ramsdell into the perfume field.

The new perfume, called "Gay Manhattan," has just reached the market in a container that's neither a bottle nor an atomizer but combines the features of both worked out on aerosol principles of engineering and chemistry to suspend fine particles in air or a mist.

The container is a beautiful golden sphere which appears to be made in two halves joined together, wrought of steel, specially plated and coated with transparent lacquer. On top is a lever, gold plated. A flick of the finger on the lever releases a cool mist of the fragrance through a tiny aperture just below the lever. When pressure is removed, the lever springs back automatically and shuts off the valve instantly. Every drop of perfume is hermetically sealed in the container against evaporation where it stays until the last bit is dispensed. The container holds a supply that is said should last many months, but is not refillable.

Seven companies have worked on this development, but for competitive reasons Daggett & Ramsdell is not

yet ready to disclose detailed information about the mechanism or the name of its manufacturer. Months of work were involved in developing fool-proof automatic action of the valve and the proper formula for the perfume.

This new package also involves new principles of perfume chemistry, since alcohol cannot be used as the carrier. The carrier is a volatile liquid which creates a pressure in the container and evaporates very quickly when released, resulting in extremely fine atomization.

To give maximum visibility to the new perfume dispenser, the company has housed it in a platform box with a beaded, irregular-shaped lid of transparent acetate. An acetate collar secures the container in the box. A note of color is added by using a background in the box simulating crimson tufted satin. The name of the perfume is applied to the metal container in white and is repeated in color on the base of the box. An outer rim of the gold on the box base accents the gold of the container. Directions for use are printed in a tiny foil-laminated folder tied to the container with a silken cord.

CREDIT: Box, Imperial Box Co., Chicago, Ill.



# The Frostmaster System...



## FROZEN FOODS

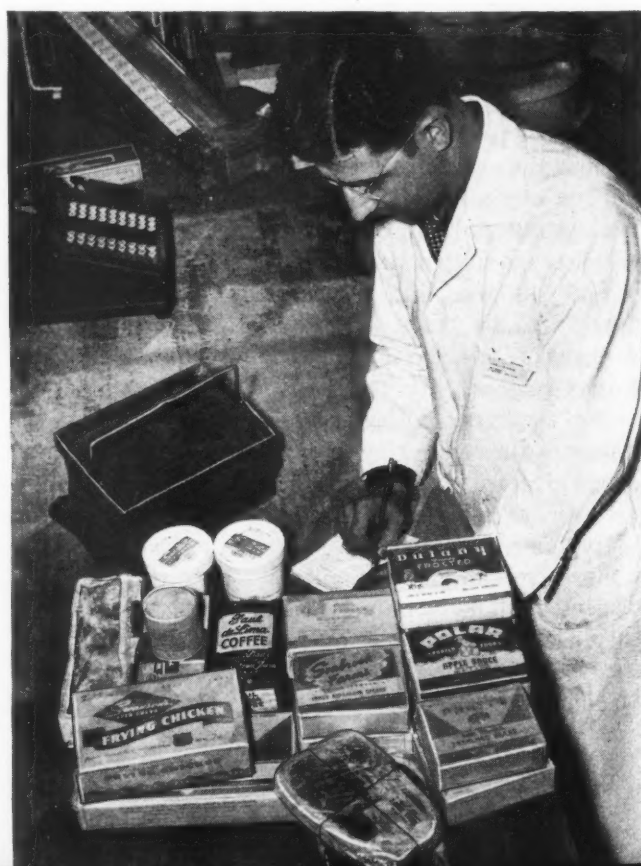
DEPARTMENT STORE SELLING  
*Frozen Food* OVER COUNTER  
*Operates*



BELOW. Zero storage bin used by Dey Bros., Syracuse store, from which to fill home-delivery orders of frozen foods. Clerk assembles order in an insulated carrier.



BELOW. Checking order for packing. Dey Bros. operation, a pilot plant for Foundation, makes annual sales of \$200 per family as against national \$5 to \$6 average.



# AND THE DEPARTMENT STORE

by George H. Sullivan\*

When 50 leading department stores in the United States and Canada jointly underwrite a \$100,000-annual budget to tap scientifically a major merchandising field—that's real business news.

And when a basic factor in this move is *packaging*—then that's particularly important news for the packaging field.

Food is the new field for department store development. Not just food in general, but frozen food. And the scientific instrument created by department stores is the Frozen Food Foundation, Inc., of Syracuse.

To understand the real significance of this move—why it was so long in coming, why packaging plays a key role—requires a quick look at department store economics.

When the American family goes shopping, department stores get a considerable chunk out of what is spent for apparel, furniture, housewares and accessories. But not food. Even though food purchases account for almost 50% of all retail spending, the department stores' share is a negligible fraction of one per cent.

There was a time when department stores sold a broad range of foods. But perishable products, on which mark-ups were adequate, brought mess, smells, spoilage losses. The general run of packaged goods, though easier to handle, had low selling margins. Stocking enough variety to meet ordinary demands took more high-cost selling space than most store managements wanted to take away from more profitable lines.

With few exceptions, therefore, department store food operations became progressively restricted to fancy specialties, appealing to epicures rather than the average housewife.

## Enter frozen foods

But the advent of frozen foods changed this merchandising picture.

Here was a completely *packaged* perishable food operation, covering every major category of the diet with a relatively streamlined assortment. Frozen foods could be promoted within the normal framework of department store practice. They took up relatively little store selling space; indeed, the major part of the store's frozen food business could be carried on from off-premise facilities, as a home-delivery frozen food service.

Half a dozen leading merchandising organizations, independently studying the potentials of frozen foods, came to this conclusion:

... the total business of all U. S. department stores ran about seven billion dollars a year.

... retail sales potential for the frozen food industry was in the neighborhood of ten billions annually.

... if only a small part of the frozen food business

\* Chief, Packaging Lab., Frozen Food Foundation, Inc., Syracuse, N. Y.



*The author making Elmendorf tear tests on frozen food packaging materials. From its Syracuse headquarters, the Frozen Food Foundation carries on a non-profit research and service for leading U. S. and Canadian department stores entering the retail frozen food business.*

could be captured by department stores, the effect on store volume would be of major consequence.

In the spring of 1945, therefore, these merchandisers joined forces to form the Frozen Food Foundation: to guide them into this new field; to serve as a "bureau of standards" once the stores actually were set up in the frozen food business.

Then followed the establishment of the Foundation's laboratories, assembly of a technical staff and intensive testing of frozen-food operating methods.

After more than a year of practical pilot operations,

**Frozen Food Foundation's  
packaging study provides  
the key to revolutionary  
new merchandising setup.**





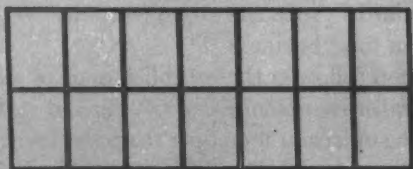
This is an example of the low-cost zero home-storage cabinet with a 3.2 cu. ft. capacity, which is the type provided to patrons of the Frostmaster home-delivery system.

## RECTANGULAR, SECTIONAL GALLON ICE CREAM CONTAINER

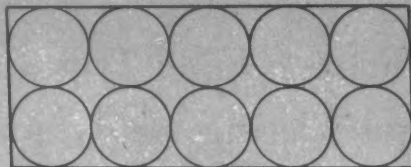
### SAVES SPACE!

#### ....IN BULK STORAGE

14 NEW STYLE  
RECTANGULAR  
GALLONS TAKE  
NO MORE SPACE..



....THAN 10  
OLD STYLE  
ROUND GALLONS



#### .... IN HOME ZERO STORAGE

OLD STYLE  
CONTAINER  
MEANS  
WASTE  
SPACE



SECTIONAL  
CONTAINER  
ELIMINATES  
WASTE  
SPACE



here are some facts which Foundation members—now grown to more than 50 stores—have to go on:

... while annual U. S. consumption of frozen foods has averaged about \$5 or \$6 per family per year, sales in a pilot frozen-food home delivery service operated by a Foundation member, and covering 300 families, ran over \$200 per customer per year.

... although yearly sales of \$50-to-\$80 per sq. ft. of store selling space is considered high for department stores, one Foundation member is averaging \$275 per sq. ft. in its over-counter frozen food department; concretely, about \$250,000 annual volume in 900 sq. ft. of store selling space, with other operations confirming this experience.

Encouraged by these figures, almost a score of Foundation members will be conducting major frozen food operations by the end of 1946, with more in 1947.

### Packaging problems

Though packaging may be leading department stores back to a major food operation, much work still must be done to improve present frozen food containers and to devise new types to meet future needs.

That is why—along with its other laboratories—the Frozen Food Foundation also has a packaging laboratory. With something of a merchandiser's approach, let's take a look at problems on which the packaging laboratory is working.

*Frozen meat, poultry, fish.* With normal supplies, these three groups account for about 40% of frozen food department volume, the most important being frozen pre-packaged meats.

Irregularity of meat cuts and the importance of having the packaging material closely conform to the shape of the cut now require an expensive manual wrapping operation.

While certain machines now are being developed to do the job, they are so expensive that they can be afforded only by relatively large operations, such as centralized meat fabrication facilities. Recently reported action by the retail meat cutters' union may definitely discourage such centralized set-ups, making the need for low-cost mechanical meat wrappers even more pressing.

From our experience thus far, frozen pre-cut meat should be wrapped in transparent material to have maximum sales appeal. The meat buyer wants to see the product, judge for herself the quality, bone and fat content, and number of servings. It is questionable whether any amount of descriptive material on an opaque wrapper will meet present shopping preferences.

What has been said of meat also applied to frozen poultry and frozen fish. In the latter case, a recent *Parents' Magazine* survey of 1,100 housewives revealed that over 90% preferred to buy wrapped frozen fish, and the great majority of these specified transparent materials. Here again, there is definite need for low-cost mechanical wrapping devices.

*Ice cream.* This product is of prime importance in a frozen-food home delivery service, accounting for as



much as 20% of total sales. Significantly, nine-tenths of this volume is in gallon-sized containers, the average customer using about one gallon every ten days.

The round gallon container presently in use has met with considerable consumer criticism. The round shape makes for inefficient use of zero storage space in the home. After half the ice cream has been served, scooping out the remainder is a messy job, and the empty top portion of the container wastes space in the storage cabinet. Further, after repeated handling, the round body weakens and caves in, making it difficult to protect the contents.

The ice cream merchandising potential is so great that devising an improved gallon container is a major Foundation packaging laboratory project. In collaboration with a leading container manufacturer, the laboratory is developing a rectangular gallon unit (see page 110) which increases ice cream storage capacity by 45%. The new package is so designed as to permit easy sectionalizing as the contents are used. It also has a re-usable cover, permitting indefinite protection of the ice cream. It is expected that this new container will overcome major consumer criticisms of the old-style round package.

**Frozen precooked foods.** The prepared meat and fish dishes, soups and similar items included in this category hold great promise, according to the thinking of some merchandisers. While packaging is of first importance for these products, containers now in use are far from satisfactory for the consumer.

Here is the typical home preparation procedure: first, defrost the package to a point where the contents can be readily removed (this is time-consuming and incon-

venient). Next, place product in a sauce pan to complete defrosting to heat to serving temperature. Finally, transfer heated product from sauce pan to serving dish.

It may be observed that this procedure does not differ from traditional kitchen practices. The promotion of frozen foods, however, rests so much on convenience that home handling methods must be simplified throughout if a strong case is to be made with consumers for these products.

Well, what kind of package should we have for frozen



Type of specially-constructed and insulated truck which makes weekly home-deliveries to Dey Bros. customers.

## NEEDED: BETTER PACKAGES FOR PRE-COOKED FROZEN FOODS

TODAY...					
TAKE FROM ZERO STORAGE	WAIT FOR DEFROSTING	PUT INTO HEATING PAN	TRANSFER TO SERVING DISH	THEN TO DINING TABLE	WASHING PAN & SERVING DISH
TOMORROW...?					
TAKE FROM ZERO STORAGE	NO WAITING FOR DEFROSTING !	PACKAGE HEATED DIRECT	NO TRANSFER TO SERVING DISH !	TO DINING TABLE IN ORIGINAL PACKAGE	DISPOSABLE PACKAGE ELIMINATES WASHING !

precooked foods? Ideally, one that can be efficiently and economically filled in the plant, travel through the distribution system to the kitchen zero cabinet, then into the heating pan—and even right on to the dining table.

This really would be convenience—and there are some signs that such improved packages may not be long in coming. They may take the form of an impermeable heat-sealed bag, inside a carton, or a single-unit container with the structural strength of a carton, made from plastic or foil, or other more traditional packaging materials.

**Frozen baked goods.** This category includes baked or unbaked pies, pastries, rolls and other bakery items. Many of these items present unique packaging problems. In many cases, attempted solutions represent merely an application of existing materials or designs to these new situations, which may account for rather poor results.

#### Pie packaging weak

Frozen pies may be used as an illustration. Although these products are very important sales producers, present packaging of frozen pies is weak in several respects. The containers often lack sufficient structural strength and the pies are not anchored within the package. As a result, product damage and special handling are almost unavoidable.

**Frozen staples.** Packaging of such long-established products as frozen vegetables and frozen fruits needs as much basic study as do containers for more recently developed specialties.

Consider frozen vegetables: A family of four probably would require at least two standard 12-oz. packages of frozen vegetables a day. Assuming adequate zero storage space in the home, such a typical family should be partial to buying frozen vegetables in large units, such as 2½-lb. cartons, because of greater economy. Recently a 2½-lb. package of frozen peas, for instance, could be bought for 67¢; the equivalent quantity, bought in 12-oz. packages, would have cost 93¢.

Despite this price differential, figures on frozen food purchases of over 250 families show that only 10% of

frozen vegetable sales are made in the 2½-lb. size package. Here is a case where inconvenience outweighs a very substantial difference in cost. With practically all the 2½-lb. frozen vegetables put up in solid pack, the housewife must open the whole package, hack off the quantity she needs or—if she wants to do it a little less strenuously—defrost the package and then try to re-freeze the unused portion. At best, it is an awkward, messy job.

Present-day consumption of frozen fruits and vegetables represents an insignificant fraction of total consumption of fruits and vegetables in all forms, including fresh, canned and dried. To the extent that this relation reflects consumer price differentials, the economies of buying frozen products in multi-pound packages may be a real competitive factor in enlarging the future use of frozen foods. This will make it essential to improve present large unit packages to a point where they will permit low-cost plant operations and enable housewives to remove 12-oz. or 16-oz. portions with ease.

#### The packers' viewpoint

Basically, what the housewife looks for in frozen food packaging is maximum convenience. Processors look for minimum packaging line costs. The objective should be to develop a container which best satisfies both the housewife and the packer.

Several frozen food processors have indicated that they want to standardize on a single type of container—one which will operate on all products and require little or no hand labor.

The words "all products" should be stressed. Some recent container developments are fine when applied to peas and other free-flowing products, but entirely inadequate for larger items and the more viscous prepared foods.

In the Foundation's opinion, the all-purpose container must essentially be a one-piece, impermeable package that can be handled in the plant as economically as a tin can, and in which the product could, if necessary, be heated and served by the housewife. Speaking of tin, it may be noted that one complete line packer-distributor is seriously (*Continued on page 174*)

PHOTO, FOOD FREEZING MAGAZINE



According to Foundation, tin may be answer to the need for one-piece impermeable package which handles economically and automatically. Dainty-Pak peaches packed by Pacific Grape Products is first of a whole line planned for this tin container.



# STOCKING PACKAGES

## For a buyers' market



*Two of new Rosedale packages, holding four pairs of hose each, occupy same shelf area as two conventional hosiery boxes containing three pairs each. Cartons open like books. Each pair is in cellophane envelope.*

**R**osedale Knitting Co. is looking ahead to a buyers' market for nylon with a new idea in stocking packaging designed to meet new merchandising trends in hosiery.

This brand of hose, heretofore, was sold in the conventional stock set-up box, three pairs to the unit. The new design shown here is making its appearance in the retail field during the month of December.

The new packages are a distinct departure from the conventional type of hosiery box. Made of varnished stock in an over-all soft shade of rose, they combine functional as well as decorative features. The new package consists of a folding carton which opens like a book and accommodates four pairs of hose, two pair in each page-like compartment. This construction means, for one thing, no more lost or misplaced box tops and consequent confusion of shades in a particular box. Two folding cartons placed one behind the other occupy the same shelf area as two of the conventional set-up boxes, one on top of the other. Eight pairs of hose are thus stored in the space formerly used to stock six pairs. Since each carton contains four pairs, the new package also may encourage a unit sale of four pairs instead of the former three-pair units.

Brand identification is prominently displayed on the box in three places: on the backbone in large script, on the box top, and on the left-hand page-like compartment. In the lower right-hand corner of the right side of the box, when opened, is a promotional note describing the specially designed heel for these hose.

The name in large script on the backbone has two advantages. It permits the clerk to spot the package easily and the customer to see it quickly from the other

side of the counter. The illustration, a full-blown rose, ties in with the brand name and is used on the top of the box. When the box is opened and placed on the counter, the name and design are still in view because of their repetition, in smaller scale, on the left inside the carton. The lettering and design are white on a rose background, giving the package a feminine feeling and appeal as a year-round gift item.

The envelopes for the individual pairs of hose are opaque cellophane in the same shade of rose and the decorative motif is repeated on the face of the envelope. A perforated sticker, which gives the consumer such information as size, length, price, etc., seals the envelope. By tearing off half the sticker, at the line of perforation, it is possible to remove the price while the envelope remains sealed and the rest of the information is intact.

The cartons are imprinted in brown on the backbone in a white space provided for information about size, color and length.

Open or closed, the boxes lend themselves well to display. The color combination, rose, white and brown, blends with most store fixtures, counters and lighted display cases. Stock-taking is made easier, since it is not necessary to remove envelopes from the carton compartments to take inventory. The number of envelopes is immediately visible by merely opening the box and, if the outside sticker label is still affixed, the clerk instantly recognizes it as a complete unit, containing four pairs of hose.

CREDITS: Designer, Georges Wilmet, New York, N. Y. Cartons, National Folding Box Co., New Haven, Conn. Cellophane envelopes, Shellmar Products Corp., Mt. Vernon, Ohio.





Four of the most popular-selling Waterman inks will be introduced during the coming year in these new 15-cent, 3-oz. sizes. The new line follows a family design of bold modern color treatment in contrast to the company's pictorially illustrated 10-cent packages, but carries the familiar 50-year-old Waterman logotype.

## New ink family . . . Waterman's 15-cent size

**T**he L. E. Waterman Co. will introduce on the market during the coming year, a new line of 15-cent inks in a completely new 3-oz. package.

In contrast to the pictorial illustrations the company uses for its line of 10-cent packages, the new Waterman family depends entirely on the simplest kind of modern design, background color and the well-known logotype known in the ink trade for more than 50 years. The same basic design will be used on all the cartons and all labels in the new line, which will include the four most popular-selling ink colors: black, blue, blue-black and carnation-red. The only variation in the packages is the change of color for the panel and stripe which goes completely around each package to designate the color of the contents.

The new packages are in answer to dealer demand for the new size. A top-notch designer was employed to plan the new packages with a modern feeling that would be completely different from the company's successful 10-cent packages, so that there will be no confusion on dealer shelves and in the customer's mind with the 10-cent packages which will be continued in a wide range of colors.

Even the picture of the famous Waterman ink bottle

is eliminated from the new 3-oz. package of blue-black ink. This was put on the package at the time Waterman's introduced its private mold "tip-fill" bottle. At that time it was felt that the shape of the bottle should be promoted on the carton until it became associated in the consumer's mind with Waterman. Now, it is believed that the distinctive bottle is so well known that it does not require promotion on the new carton.

The private mold bottle is continued, however, in the larger size but with a new label die-cut to conform to the irregularly shaped face of the bottle. The background of the label is yellow with the display panel containing the two words "Waterman's Ink" and the color designation of the ink printed in reverse white on the panel in the same color as the ink—black, blue, blue-black, red. To indicate "blue-black" the panel is printed one-half black and one-half blue. Above the designating color panel is the word "permanent" on some of the labels; the word "washable" on others, etc. Below the panel is the promotion slogan for the bottle, "In the tip-fill bottle," tied in with a miniature line drawing showing how the bottle may be rested on its side when used for filling a fountain pen. Caps are lithographed in the colors of the inks, giving a bright contrast.

The front and back panels of the cartons carry exactly the same design as the bottle labels, except that the amount of contents is printed below the identifying panel. Side panels, top and bottom, carry a stripe of the ink color, with the name of the maker, product and color printed across the top and bottom, so that all cartons are identifiable no matter how they are placed on the shelf. On the side panels appears the tiny identifying miniature line drawing showing how the bottles may be tipped for filling the pen.

On the counter the packages say "Waterman's Ink" quickly and because of the large stripe and panel designating the ink color, it is easy to pick out immediately the color of the ink desired. The packages are attractive in mass display. At a distance the simplicity of the over-all pattern is also effective.

The L. E. Waterman Co. is one of the oldest producers of packaged inks for fountain pens. In fact, the founder of this company is credited with the invention of the fountain pen. As an insurance salesman some 50 years ago, he found it inconvenient not to have pen and ink on hand when a prospective policy holder was ready to sign on the dotted line. Carrying a bottle of ink was troublesome and hazardous. So he made a pen which carried its own ink. As the use of the fountain pen grew, special packaged inks were developed to supply fountain pen users with inks which would flow easily in these pens and make them write more efficiently.

This new packaging program also brings to light a very interesting sidelight on package designing. Out of the company archives came a group of foreign ink packages mostly from prewar China and Japan. They show clearly how even the best of designs can be copied by unscrupulous imitators when there are no trade laws to protect against such practice.

In photo below are two genuine Waterman packages. In the background is a collection of five imitations. In each case the imitators selected the exact colors used on the genuine Waterman packages, but changed the trade name. In the one at the extreme right, if you read carefully, you will see that the trade name is "Waterpolo's Ink"—easy to mistake for the real name. The second from the right is even more difficult to detect the fake, but by reading closely you will see that it is "Waiterman" instead of "Waterman." The imitators of the other three didn't try to imitate the name, but simply used the device of copying almost identically the design in form and color, even to the shape of the trademarked bottle mold, which they had copied by oriental glass makers.

This copying of design forms, even without copying trade name is common practice in many parts of the world, particularly in countries where literacy is low and many products are bought by recognition of a design, because the purchaser cannot read. It is also one of the reasons why many exporters of famous American brands are slow to change their packages for foreign markets, even though they change their domestic designs. They feel that foreign imitators can make capital out of trademarked designs without any means of protection. It is a problem that has been troublesome to American exporters for years and will not be fully solved until there are stringent laws in all countries governing trademark registration.

CREDITS: Design, J. Gordon Lippincott, New York. Bottles Brockway Glass Co., Inc., Brockway, Pa. Folding cartons, Empire Box Co., Garfield, N. J. Labels, Maryland Lithography Co., Baltimore, Md. Closures, Owens-Illinois Glass Co., Toledo, Ohio, and Anchor Hocking Glass Corp., Lancaster, Ohio. Shipping containers, Atlantic Container Corp., Long Island City, New York.

The two packages against the blue background are genuine Waterman packages. The others are all imitations from pre-war China and Japan. They are interesting examples of what happens to trademarked design when there are no trade laws to prevent such copying.





New labels for Wiedemann's three types of beer retain elements of lettering and trademarking familiar since 1870, yet are vastly improved in readability in line with modern selling principles.

## BEER LABELS

... traditional yet modern

Illustrative of many of the best points of modern labeling is the comprehensive redesigning of cartons and labels recently undertaken by the Geo. Wiedemann Brewing Co., Inc., Newport, Ky., for their products, Wiedemann Bohemian Beer, Bohemian Special Brew and Royal Amber Beer. These beverages are distributed in bottles and cans, both of which are packaged in solid fibre cartons.

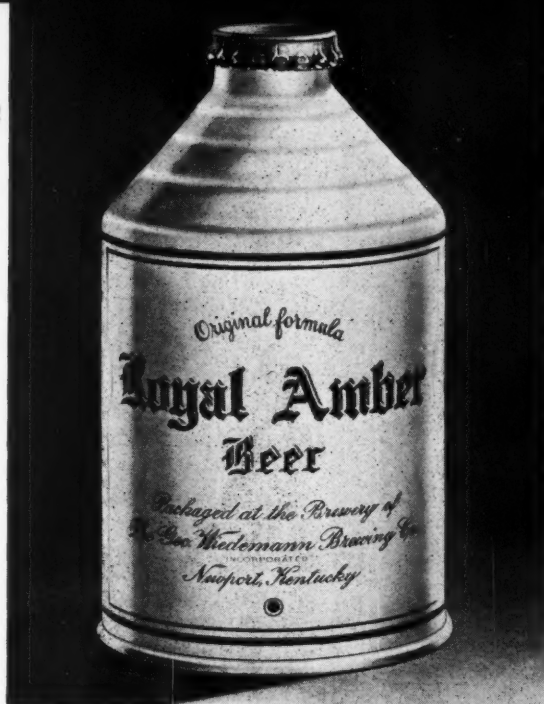
Under the guidance of H. Tracy Balcom, Jr., president, the Wiedemann company has always sought to maintain an enviable reputation as brewers of fine beer, known for its quality and flavor. In its relationship with distributors, retail dealers and consumers, the com-

pany has prided itself on upholding the highest standards of business integrity. It is this prestige which the company has tried to carry over into its program of redesigning, directed toward one basic goal—to create more attractive, modern packages retaining the aura of quality which has always distinguished its products.

Another principal aim of the package redesigning program was to take advantage of all the factors which stimulate impulse sales. Through a new continuity and harmony of design and color, with added prominence to the product names, a group and promotional tie-in was established by which each bottle, can and carton is readily recognized as a member of the same family.



White-enamelled cans are lithographed with label design following as closely as possible the colors and form of the bottle labels. Trade-mark and legal information, however, appear on side panel.



Every change in design had these aims in view: for the consumer, to attract and hold his attention, promote easier reading and facilitate identification of the product; for the dealer, to increase display and selling value of Wiedemann beers whether on the shelves or in storage.

#### Family relationship

The labels on the bottles and the lithographed designs on the 12-oz. cans of the Wiedemann Bohemian and Wiedemann Royal Amber were redesigned to place greater emphasis on the names and to create a similar pattern of style. It was necessary in doing this, however, to retain the over-all character of the designs which had been in use since 1870.

Shadow lines in black were added to the Old English gold printing of the name "Royal Amber" to increase readability. Tax and content information data were taken away from the face of the label and used as part of the side border. (See Fig. 3.) Royal Amber labels had always used gold print with "Original formula" at the top in script on a curve, and, at the bottom, the company address in straight lines of old-style script. These same elements were retained in the new label, which is a glossy, white coated paper.

A similar pattern was followed on the Wiedemann Bohemian labels, except that the color combination is red and black on a white background of plain, uncoated paper. Across the center, "Wiedemann" is in red decorative print with prominent gold shadow lines, and "Bohemian" or "Bohemian Special Brew" at the top in curved script. This script was taken directly from the old 1870 design.

The company address at the bottom of the labels is in straight black script, with other information moved to the side edges as a vertical border design.

The three bottled beers also carry neck labels, which feature the Wiedemann trademark, a defiant eagle on

an American shield over a stylized red "W." Otherwise these labels are printed on the same papers and with the same colors as the main labels. Their lettering identifies the specific type of beer contained, and vertically at each end appear the words "Union Made." Crown caps for the bottles are lithographed in designs which follow the general label principles but are distinctive for each type of brew.

The designs on the cans of Royal Amber and Wiedemann Bohemian beers (Fig. 2) are identical with the bottle labels, except for the placement of legal in-

Close-up of two bottled beer labels. Royal Amber is gold lettering, strengthened with black shadows around name, on glossy white paper; Wiedemann is dull white with name in red outlined with gold and remainder of printing black.





*Redesigned cartons for bottled beer are outstanding in design and color. Distinction yet relationship between two varieties of beer is achieved. Note continuous design around end panels. The printing is in four-color.*

formation in a narrow side panel. These cans are entirely white enamelled, which gives them a clean, sanitary appearance. The label designs appear on front and back, the panels being set off by gold and red lines. On the sides is the famous Wiedemann "W" trademark in a gold circle with legal data above and below. These new can designs, which also incorporate some of the features of the old 1870 labels, are clear-cut and striking; there is no mistaking the family resemblance.

Formerly the bottle and can labels on Royal Amber and Wiedemann Bohemian beers had little similarity except the size of the can, trademark and name. Now the relationship of color, typography and style establish a group tie-in which is quickly identified by both consumer and dealer.

#### Continuous design on cartons

An unusual feature of the redesigned solid fibre cartons (Fig. 4) is the continuous design which runs around all four sides of the container, thus winning a design

victory over the usually unattractive end, which is complicated due to carton construction.

Both carton designs of Royal Amber and Wiedemann Bohemian beers show a series of parallel stripes and bands with large discs centered on top.

The bands on the Royal Amber carton are purple with yellow or purple discs. On the long sides "Royal Amber" is in yellow with the Wiedemann trademark in the upper part of the disc. On the small sides the name is in purple on a yellow disc, while on top, it is yellow print on a purple disc.

The Wiedemann Bohemian cartons have green bands with the name in red. The only disc is on the top, but the Wiedemann trademark in red on the sides is in the same relative position as on the Royal Amber carton. The general impression of the design on the side panels is that of a cross, whereas on the Royal Amber carton it is that of a circle and bar.

When placed side by side or top to bottom, the Royal Amber carton and the Wiedemann Bohemian carton match stripe for stripe, band for band; the theme of the design carries from the one to the other, but there is a distinct difference in color.

Not only do the designs and colors harmonize and complement one another, but the two key-words of all Wiedemann beers printed on the ends of the lower bar on the cartons make a continuing sales message: "quality—flavor," "quality—flavor."

This identical design also is on the smaller cartons used for packing the cans.

CREDITS: Bohemian bottle labels, Rainbow Lithographing Co., Cincinnati, Ohio. Royal Amber bottle labels, The United States Printing & Lithograph Co., Cincinnati, Ohio. Lithographed cans and crown caps, Crown Cork & Seal Co., Baltimore, Md. Cartons, Container Corp. of America, Chicago, Ill. Design and production supervised by Strauchen & McKim, Cincinnati, Ohio.

## Industry-wide cap ties in with advertising



A specially designed vacuum seal jar cap provides an unusual tie-in to the national advertising program recently launched by the Preserve Industry Council.

The crisp brown piece of breakfast toast and the bright-colored rainbow appearing in the 2-page ad in the *Saturday Evening Post* are reproduced on the jar caps. Overlaying the color on the cap is the campaign slogan, "Brighten Up the Breakfast Toast."

Millions of the jar caps have been distributed to preserve manufacturers who are members of the Council. Stocks displayed on grocers' shelves are currently carrying the new caps and have added momentum to the first ad.

The caps are produced by the White Cap Co., of Chicago, members of the Council.



# Cutlery . . . well marked and well protected

A new idea in cutlery packaging, which considerably aids in the handling of pocket knives by the dealer as well as the jobber, has been devised by the Camillus Cutlery Co., New York.

The important feature of the new packaging program is a set-up box which holds 1/2-dozen knives, with the number and picture of the knife within shown on the end panel of the bottom section. Box tops are all alike with a cutout on the end which fits over the identification on the bottom section.

When the top is removed, the number, being on the bottom section, remains with the merchandise rather than being separated from it as can happen when identification appears on the lid. Again, tops can be switched without fear of a mix-up in merchandise.

The picture on the end of the box quickly identifies the knife inside so that it is not necessary to open the box when selecting merchandise from the shelf. Stock numbers are large so that they can be seen from a distance and are made up of only two digits so that they can be remembered and used easily.

Copy of the bottom of the box tells the clerk the outstanding qualities of the Camillus line for help in selling. Three small line drawings on the back panel tell how to sharpen a knife properly—more information which the clerk can also pass along to the customer.

Instead of the opaque paper used formerly to wrap the individual knives, each is now slipped into a cellophane tube printed with the Camillus trademark. This enables the customer to see the knife without removing it from its protective covering. In addition to improving the appearance and salability of the merchandise, the transparent wrapping saves much handling with its resultant tarnishing and rusting.

On the knives which have a new type can opener attachment, consumer education takes the form of a small tag attached to the knife itself showing the correct way to use the attachment.

**CREDITS:** Design, Glen Gollon, New York City, under the supervision of Morris Sanders, industrial designer, New York. Carton, Central Paper Box Co., McGraw, N. Y. Cellophane envelopes, Humitube Mfg. Co., Peoria, Ill. Informative tag, Robinson Tag & Label Co., New York City. Display, Regent Specialties, Inc., Rochester, N. Y.

Bottom of carton is used for sell copy to aid clerk. Rear end panel shows the right way to sharpen a knife.



Large, easily-read stock numbers make selection easy from stock space in this wood- and-glass counter display.



Quantity, stock number and drawing of knife appear on bottom section of the new Camillus carton. De-cut opening in top section fits over identification making tops interchangeable without mixing up merchandise.





# Non-tipping nail polish

...new bottle, new carton, new shape



*New La Cross nail polish package is a complete departure from conventional tall bottle generally used.*

With the ink scarcely dry on the order lifting restrictions on private mold glass containers (L-103), manufacturers—particularly of cosmetics—who have worked on their postwar lines all during the hard war years, are rushing to get their new products into new packages and onto the market.

One of the first to hit the retail counters in a private-mold bottle is Naylor, La Cross' new formula for nail polish in its streamlined postwar container above, distributed by Schnefel Bros., Corp.

Bottle-wise, the package is among the first radical departures from the conventional tall nail polish bottle in years. It is claimed, however, that the design is unconventional not only to present a striking contrast to competitive lines, but for purely functional reasons as

well. Its wide base makes it practically impervious to tipping and spilling; its construction, it is claimed, assures a more uniform distribution of the polish. Also, the bottle is so shaped that it slants backward, presenting an upwardly slanted surface for the label. On the display counter, this upward slant is considered to have more effective customer appeal—to encourage the shopper to examine the product.

The plastic screw cap holding the applicator is another departure from the norm. A long, tapered quill which appears to be aluminum tops the short brush to aid in applying the polish. La Cross says of this innovation "...No more gripping a clumsy bottle top with a long awkward brush... the graceful quill-type stem gives controlled polish application. The quill top

balances against the index finger...the short-stemmed brush insures a smooth even flow of polish."

The label, gracefully curved to follow the sweeping lines of the bottle, is printed with silver ink to carry out the color scheme of the quill. Color name and Nylon, appear in red, with La Cross in white.

An intricately designed, one-piece folding carton of clay-coated boxboard varnished on both sides (Fig. 4), folds into a triangularly shaped container for the bottle, which again presents an upwardly slanted face when on display. The die cutting and scoring of the board allows for double side walls and bottom for the carton, adding structural strength.

A small perforated portion in the tongue which folds back to form the inside bottom of the box, provides a stop for the bottle to prevent it from slipping forward in handling, and opening the tabbed cover-flap.

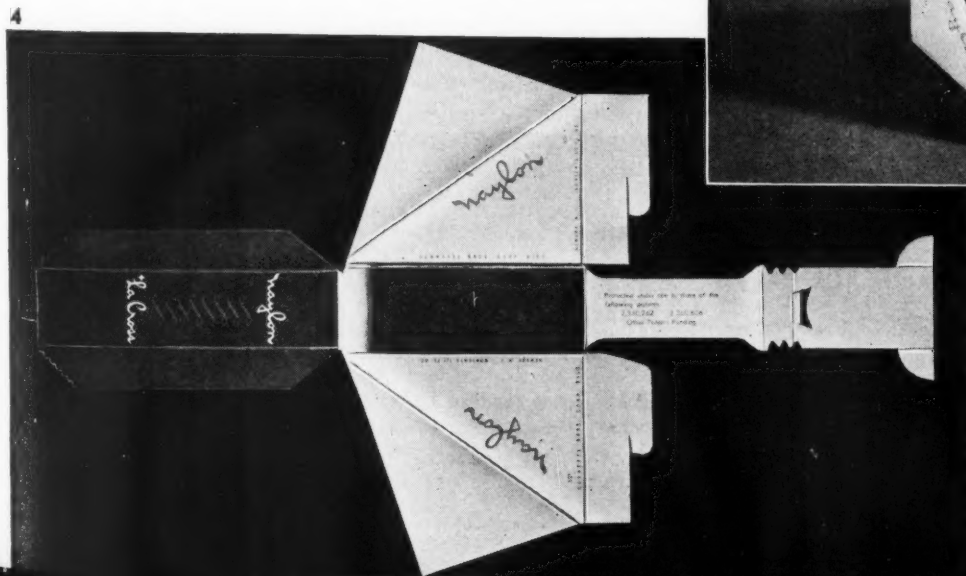
The shell-pink of the bottle cap and the deep rosy red of the label printing are repeated in the carton color scheme, with copy overprinted in gold. On the slanting front face, reverse white is used to spot the names Nylon and La Cross. That portion of the rear face of the board which shows when the package is in the open position (Fig. 3) is covered with silver ink to make a pleasing background for the bottle.

To save space in storing these containers on the retail shelves, two of the triangular cartons fit together to make a rectangle (Fig. 3). The cartons may be stacked in these rectangles either lying on their sides for a wide shelf, or standing erect, in a narrow space.

For the window or counter, the triangular shape of the carton also lends itself to various display patterns. By fitting several together, varying their positions, the number of geometric designs which can be achieved are limited only by the imagination.

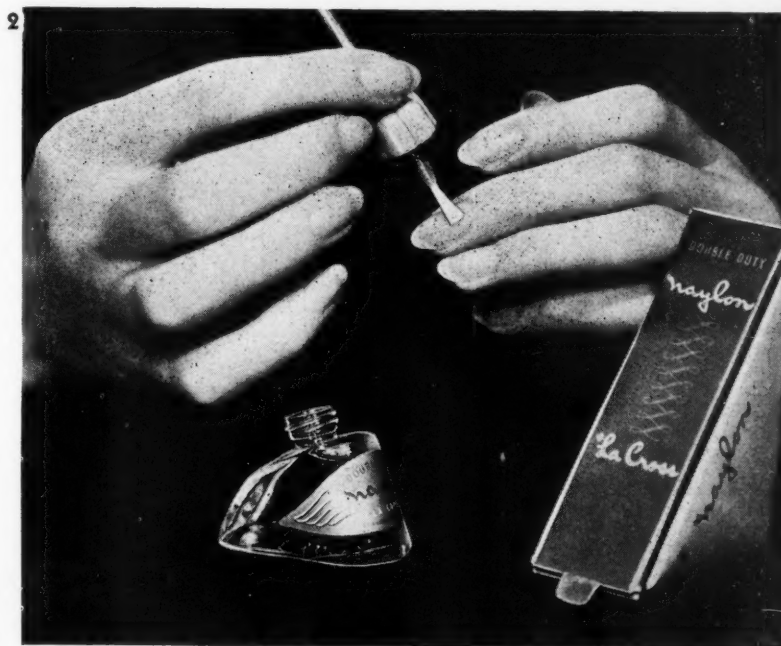
The launching of the new polish, said to dry very rapidly and remain unusually flexible, took place in a group of specially chosen stores in test cities. To date, reports from these stores are enthusiastic with complete sellouts in the first week to prove the point. Promotion included fashion shows, window displays, special sections and interior displays.

Carton of clay-coated boxboard when knocked-down (below), shows intricate cutting and scoring to achieve triangle.

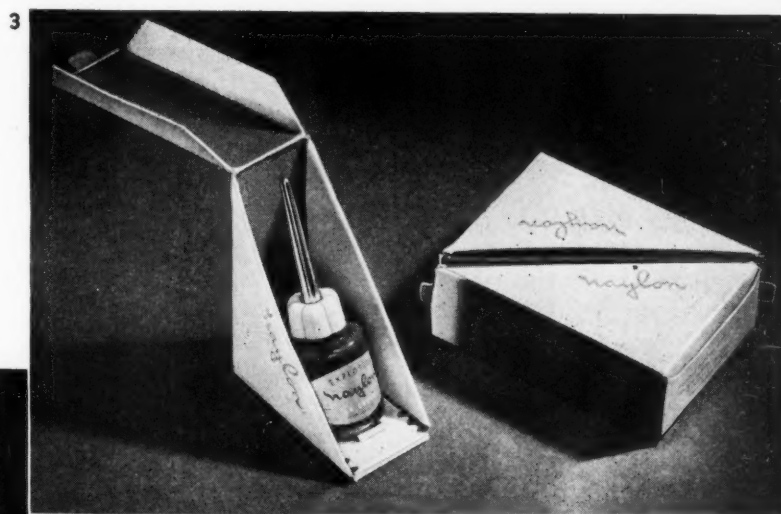


La Cross is justly proud of its Nylon package—its private mold bottle—which has been "in the works" since the early part of the war. And to those in packaging who have waited patiently for the revocation of L-103, it is the first sign of what is to come in the custom-molded glass container of the future.

CREDITS: Carton invented and patented by R. Van Rosen for J. Makowsky Corp., New York. Paperboard, "Ridgelo," Lowe Paper Co., Ridgefield, N. J.



The short brush (above), makes application easy wide base of bottle prevents tipping, backward slant of both bottle face and triangular carton adds display value.



For stacking and storing, the triangular cartons fit together to form rectangle (above). For display, several may be fitted together, varying the positions to form many geometric patterns.





## Bubbling boxes

The success of Lucien Lelong's Taglio perfume in a transparent acetate container which appears to be full of frosty bubbles (see *MODERN PACKAGING*, March 1946, p. 155), has prompted the introduction of a line of additional cosmetics in similar containers.

The three shown here are representative of the new line. Although the Taglio perfume container is now injection molded, these containers are still hand fabricated of cellulose acetate—in some cases in combination with paperboard.

They are used for powder, sets of small vials of perfume, cologne or combinations of these items. The rectangular box at the top of the illustration has a paperboard base. The lid has an additional hollow rectangle set on top. Between this extra piece and the lid itself is a spray of flowers for added color interest.

The small round box holds face powder. A jumbo size of the same design (not shown) holds bath powder to make a matching set. The shallow round box, again with a paperboard base, holds four small-size perfume bottles set into a die-cut platform.

CREDIT: Cellulose acetate, Celanese Plastics Corp., New York.

# DESIGN

## Fibre cans for dry products



A new use of the fibre can for dry products is this package for Magic Chef macaroni dinner packed by Kurtz Bros. Corp., Bridgeport, Penna.

The recently adopted new design (see *MODERN PACKAGING*, November 1945, p. 114) has been used in this instance so that the package is suitable for either vertical or horizontal display. On one face the figure and copy runs up and down; on the reverse, sideways. In mass display, both faces can be utilized to form a pattern. Side panels are used for instructional copy and suggested recipes for variations in preparation.

In addition to being packed in the metal-end fibre container, a radical departure from the conventional folding carton, the package is one of the first to use Ster-Ray sealing—a Hygeaire process.

According to the packer, national distribution has just been completed and, to date, consumer acceptance of this familiar product in its new container has been more than satisfactory.

CREDITS: Metal-end fibre can, American Can Co., New York. Labels lithographed by Rossotti Lithographing Co., North Bergen, N. J., Independent Lithograph Co., San Francisco, Calif., and Miers-Bachman Lithographing Co., Allentown, Penna.



## Refillable perfume containers

Perfume packaging, incorporating permanent dresser pieces, has been introduced by Sherry Dunn, Inc., Los Angeles, Calif. Both Macabre (above) and Violin Suite come in highly decorative refillable acrylic packages with the actual perfume in a removable glass vial which can be replaced at a considerable saving over the original container.

Violin Suite is packaged in an authentic copy of a violin sprinkled with brilliants. A small bow completes the illusion and contains a small purse-size flacon. The whole unit is then overpacked in a lush satin-lined miniature violin case.

The vial of Macabre is encased in a brilliantly studded oriental dagger which is also refillable. The dagger is then encased in a striking box which is suitable for re-use as a jewel box. An exotic oriental face, molded of plaster is adhered to the plastic of the lid giving the effect of a bas relief. The whole box is then treated with a rich suede finish.

CREDITS: Acrylic (Lucite) E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. Molder of Macabre and Violin Suite containers, Continental Plastics, Los Angeles, Calif.



# HISTORIES

## Double package for pie mix

Pyequick, a new Betty Crocker product of General Mills, Inc., consists of two units overwrapped with a waxed paper with labeling information and drawings lithographed in color.

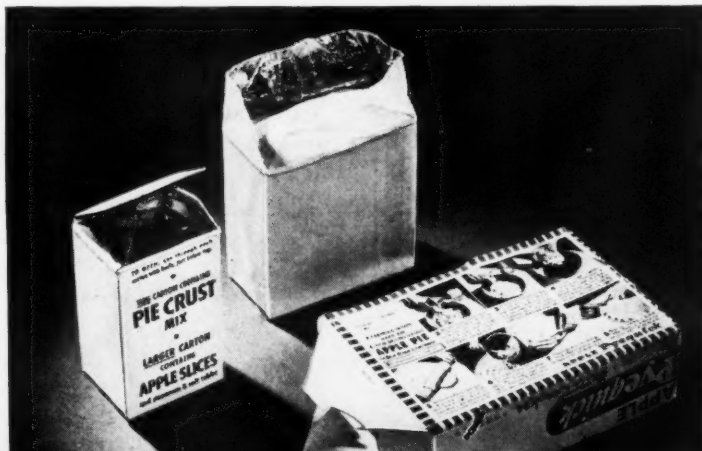
The inner packages for the pie crust mix and dehydrated apples are perhaps more interesting than the outer wrap. A laminated glassine greaseproof liner enclosed in a white patent-coated carton holds the pie crust mix. The apple filling unit consists of a waxed glassine liner enclosed in a bending chip shell wrapped with a heat-sealing foil and then dipped in a special

high-melting-point wax. Because of the extremely hygroscopic nature of the apple filling; it was necessary to design a virtually moistureproof package.

The container for the apples, because of its wax dip, carries no copy but the pie crust package tells the consumer that she will find the apples in the other package.

The product is just being introduced to a select market, packed 12 units to a shipping case.

CREDITS: Artwork, Bureau of Engraving of Minneapolis, Minn. Label, Harrison & Smith, Minneapolis, Minn.





ABOVE. A full line of pre-packaged fruits and vegetables on display in non-refrigerated cases in an Indiana store cooperating with Purdue experiment. The quick turnover is the key to the success of this retailing method.

by F. C. Gaylord and K. I. Fawcett\*

The handling of fruits and vegetables has gone through a gradual evolutionary process from bulk to barrel, crate, hamper, basket, carton and paperboard tray. Almost all of these methods have resulted in tremendous losses before and after reaching the consumer. While pre-packing, re-packing and consumer-unit packaging are not new, their widespread application to a range of perishable products may offer new opportunities to cut waste and deliver, to a wider group, better fruits and vegetables.

For two years the Purdue University Agricultural Experiment Station has been studying this method of distribution. The Purdue project differs from the widely publicized "Columbus Experiment"<sup>1</sup> in that the Columbus project has dealt almost exclusively with products packed and held *under refrigeration*, while the Purdue products have been packed and distributed *without* refrigeration. In this work the aim has been to find whether it is possible to pack quality products and get them to the consumer within a 48-hr. period or less without any considerable loss of palatability and vitamin content.

Retail distributors in rural areas, small towns and even the smaller stores in the cities of the Midwest handle most of their supplies of fruits and vegetables without refrigeration. Under present conditions it seems reasonable to assume that it would be physically impossible for many of them to secure adequate refrigeration for some time to come, so that any method that

\* Agricultural Experiment Station, Purdue University, Lafayette, Ind.

<sup>1</sup> See "Packaged Produce—the Columbus Experiment," *MODERN PACKAGING*, July 1945, p. 89.

BELOW. Close-up of folding paperboard tray package, which is well designed with "Crispy Fresh" in red on green basket-weave background.



## Packaged produce. w

would enable retail distributors to handle more and better quality fruits and vegetables would be the first step to better consumer quality and more widespread distribution.

It is for the purpose of exploring means to such a method that Purdue University has been supervising the experimental operation in Indiana. It is hoped that the data collected so far may be instructive to all those interested in pre-packaging.

It was considered that a method of fast turn-over at lowest cost might offer possibilities to groups like the Marion County, Ind. growers, who produce a large volume of high quality vegetables and sell them daily to markets near at hand. In the present set-up, Minardo Bros., wholesalers, of Lafayette, Ind., are the distributing center for retail stores within a 75-mile radius. Within this area are found approximately 1,500 stores. From Minardo records, the fact stands out that 75% of these stores handle only 25% of the line of fruits and vegetables distributed during the year. The possible cause for this is that present wholesale packages are too large for a large number of smaller retail stores to handle economically. Unit packaging might offer possibilities in breaking units into sizes that would allow small retailers to handle a complete line throughout the year. If this happened, a greatly increased amount of



perishables could be distributed to the advantage of grower, distributor and consumer.

#### Inception of Purdue project

The Purdue project was set up late in 1944, the work starting early in 1945 at Indianapolis. This region has the advantages of being an important unloading center for shipped-in products as well as being in the midst of a large fruit and vegetable area.

During the first year, K. I. Fawcett, of Purdue, had complete charge of the project and all products were bought, handled, packed and distributed under his management. All sorting, grading and packaging was done by hand. In the spring of 1946, the project was moved to Lafayette and arrangements were made so that only the experimental part of the work was done by Purdue, while the buying, selling and distribution were done by Minardo Bros.

In 1945 the products were distributed in Indianapolis through two major chain stores and two independent stores. It was hoped to secure information on:

1. Necessity and desirability of using complete refrigeration.
2. Consumer preference.
3. Keeping qualities.

4. Packing losses.
5. Packaging materials and packaging costs.
6. Palatability and vitamin content of produce unit-packaged as compared with other means of distribution.

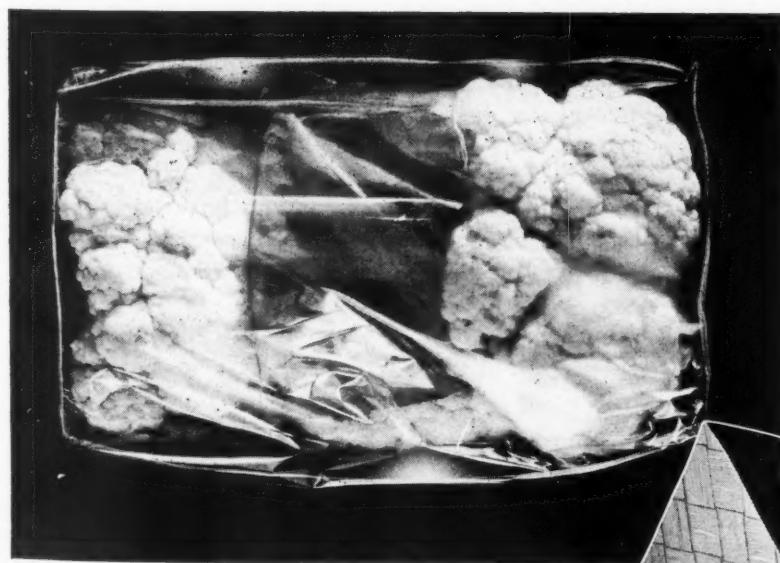
#### Equipment and containers

At the beginning, the packaging equipment consisted of a washing tank, drying equipment, sorting tables, belt conveyor, scales and sealing equipment and an abundant supply of clean, cold water. Later a semi-automatic wrapping machine was used. Women were paid at the rate of 60 cents an hour. A set charge of 3½ cents per package was added which, plus cost of product, made the wholesale cost price. The trays used (Fig. 2) were green on white with basket-weave effect. The brand name "Crispy Fresh" in red on each tray identified the product. Originally five different sized trays were used for packaging the various vegetables, as follows:

Tray No. 407—7 in. by 6 in. by 3½ in., held 2 lbs. of green beans, 1 lb. of spinach, 2 lbs. of onions, 4 lbs. of potatoes, 2 lbs. of turnips, 2 lbs. of beets or 1 lb. of mustard.

Tray No. 406—10 in. by 2½ in. by 2⅛ in., held 4

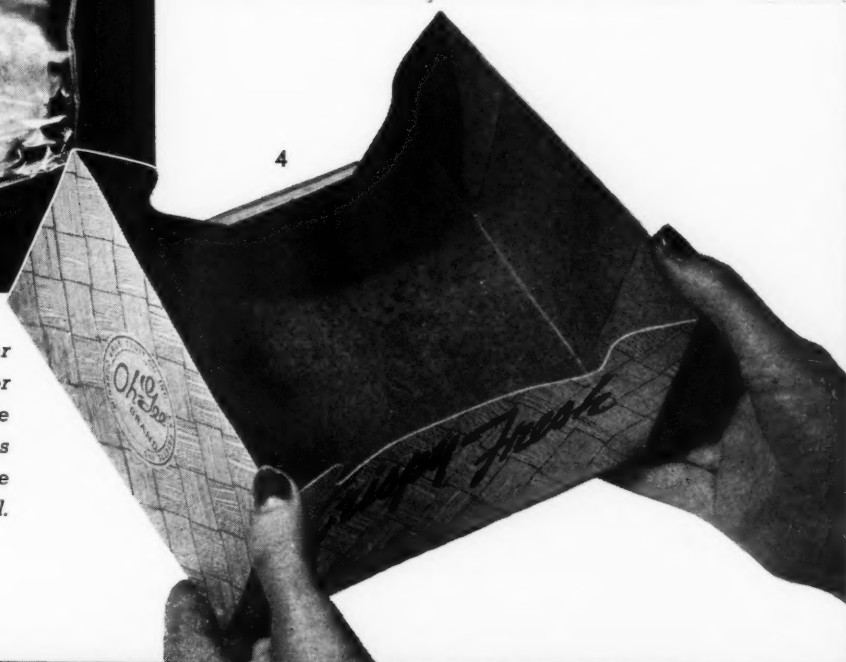
## e. without refrigeration



3

Top view of a 1-lb. package of segmented cauliflower (above). A small green leaf is placed in each package for added color interest and to indicate freshness. The simple tray (right) comes with end tabs glued but with sides scored so that it folds flat. Note that the brand name of the wholesaler appears on the end panel.

*Most investigations and experiments with complete pre-packaged produce operations have led to the conclusion that refrigeration is essential. At Purdue University, however, an experimental operation has centered on the idea that under certain conditions, with prompt packaging and rapid turnover, refrigerated cases are not necessary. This is a report on the first two years of the project.*



4





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*After washing and dipping in light, preservative wax solution, green beans are weighed, and arranged in trays by hand.*

or 5 tomatoes weighing 16 to 22 oz. or 4 to 5 peaches weighing 1 lb.

Tray No. 403—7 in. by 5 in. by 2½ in., held one head of endive, approximately 11 oz.; one head of lettuce, 11 oz.; parsnips, 1½ lbs.; radishes, 3 bunches, or 1 lb. of cauliflower. (A carton ½ in. shallower would display cauliflower to better advantage.)

Tray No. 402—7 in. by 3¾ in. by 1½ in. held two large mangoes or 1 lb. each of plums, grapes or lima beans.

Tray No. 401—13 in. by 2¾ in. by 2 in. held one large or two small stalks of celery.

These trays (see Fig. 4) have glued tabs but are scored on the sides so that they fold and store flat but may be set up ready for filling with a single motion. They are cut deeper on the sides, to provide maximum visibility of the produce.

Since the packing house for the project in Indianapolis was just across the street from the large South Side wholesale produce market, where a large percentage of local-grown fruits and vegetables are sold and with many commission merchants and wholesale distributors located adjacent, a constant supply of both shipped-in and local-grown fruits and vegetables was available.

#### First year's operation

During the first season's operations, 22 different fruits and vegetables were packed. These included apples, peaches, pears, grapes, cranberries, plums, tomatoes, celery, endive, lettuce, mustard, spinach, beets, onions, parsnips, potatoes, radishes, turnips, green beans, lima beans, cauliflower and mangoes. Of these, tomatoes, green beans and cauliflower were most extensively packed.

The working arrangements with the retail distributors were that any store handling our packaged products had the privilege of returning any spoiled, stale or shopworn merchandise, and all such were deducted from their accounts.

Of 7,000 packages of the nine major products packed, only 3.8% were returned for all causes. Of the "big six," which consisted of tomatoes, green beans, spinach, cauliflower, turnips and endive, less than 2% was returned.

Any perishable fruit or vegetable starts to deteriorate

as soon as it is harvested, and usually the longer between the harvest and the consumer, the poorer the quality of the product. High store temperatures, handling and natural physical breakdown limit the fresh period of perishables and cause heavy store losses.

Packaged tomatoes under ordinary store conditions were in good condition four days after delivery. One lot packaged July 20 was still in good condition July 28.

Bulk green beans had very little crispness left after two days in the stores and sorting was necessary. Packaged beans were in good condition for four days.

Endive, spinach, parsnips, bunched carrots and celery remained crisp and in good condition for four days.

Cauliflower was in good condition for three days but there was a tendency for it to discolor after two days in the stores. This was especially true if any of the segments had been bruised prior to packaging.

As an experiment, packaged endive, tomatoes, cauliflower, green beans and radishes were included in a car of mixed vegetables shipped from Indianapolis to Atlanta, Ga. A box containing the packages was placed on top of the load at the doors, as this is the warmest part of a refrigerator car. These fruits and vegetables, according to the buyer, after third-day delivery and five days on display, were in good condition.

#### Protective coating and wraps

Paraffin dips and wax coatings have been used for years on various root and citrus crops<sup>2</sup> to prevent excessive moisture losses. In this work a newer wax product, "Stay Fresh," was employed. This material is a grayish liquid that readily mixes with water. Vegetables dipped in this material took on a clean, fresh lustre not obtainable in unwashed products, and the keeping qualities were greatly enhanced. No apparent odor, color or taste of the material was left on the vegetables.

This wax was used on green beans, tomatoes, mangoes, beets, parsnips, turnips, lima beans, potatoes and cauliflower.

After being thoroughly washed in fresh water, the produce is placed in a woven wire basket, submerged in a tank of the aqueous wax solution, then allowed to drain and dry. The wax also can be applied in other ways: it can simply be added to the last washing water,

<sup>2</sup> See "Invisible Package," MODERN PACKAGING, Nov. 1944, p. 75.

TABLE I—COST OF PRE-PACKING SEGMENTED CAULIFLOWER  
(1-LB. NET CARTONS)

	Labor cost in cents			Total labor	Material cost in cents				% Waste*
	Prepare	Package	Wrap		Produce	Wrapper and carton	Total cost	No. packages	
March	0.01	0.011	0.006	0.027	0.185	0.0195	0.231	1,671	63
April	0.005	0.02	0.005	0.03	0.217	0.0195	0.266	2,754	70
May	0.01	0.023	0.008	0.041	0.239	0.0195	0.299	1,000	70
June	0.009	0.016	0.01	0.035	0.249	0.0195	0.303	838	72
Average	0.007	0.019	0.007	0.033	0.222	0.0195	0.277		69

\* Represents percentage of head discarded when only segmented heads are packed.

or it can be sprayed on under pressure as the produce moves along the preparation line.

Transparent overwraps of five different types, as follows, have been used over trays of pre-packaged fruits and vegetables:

1. Moistureproof and heat-sealed.
2. Moistureproof and solvent-sealed.
3. Semi-moistureproof and glue-sealed.
4. Semi-moistureproof and solvent-sealed.
5. Semi-moistureproof and heat-sealed.

Some fruits and vegetables, especially those wrapped with the first two types above, will "sweat" badly. This "sweating" makes moisture which condenses on the inside of the wrap and detracts from the appearance of the package, and with such vegetables as green beans, spinach and bunched carrots the containers become limp and some will eventually fall apart at the seams.

Semi-moistureproof overwrap allows the passage of some moisture from the contents and if stored at room temperatures "sweating" will not occur.

The three latter types of overwraps have, therefore, been used, and their uses only to the extent and conditions of this experiment will be discussed.

#### Wrapping problems

The semi-automatic wrapping machine used in this project is equipped with a solvent-sealing device as well as a heat-sealer. It applies a running and two parallel cross glue lines, in solvent sealing, and a knife cuts the overwrap between the cross lines. This in itself calls

for careful adjustment, as any miscutting will cause a poor seal or a poorly wrapped package. Under excessive moisture conditions either in the packaging room, storage or the contents of the package, glue-sealed wrappers will not stick; this detracts from the appearance of the merchandise. Also, under extremely dry packaging room conditions, with thin glue lines or with a slow operator, there is a tendency for the glue to dry before the seal can be made.

The semi-moistureproof overwrap material that is solvent-sealed adds more to the appearance of the merchandise than either of the other two, but it is much more difficult to apply. In the first place the solvent vulcanizes the two surfaces and a good seal is guaranteed—but a heavy application dissolves the overwrap and holes will appear at the seams. This is not too objectionable if they are on the ends or bottom of the container. This solvent also dries rapidly. Under certain moisture conditions, both in the overwrap and in the packaging room, static electricity will be generated causing the wrap to roll tightly as soon as it is cut.

With semi-moistureproof materials that are heat-sealed, the sealing depends upon the thermostatic heat control. This material does an excellent job with practically no waste.

The machine cuts the wrapping film to the desired size and the sheet is roughly wrapped by hand over and under the tray of produce before it is placed in the machine. This may be done by a single hand motion, as shown in Fig. 6.

Where solvent- or glue-sealing is used, the adhesive

6



Machine delivers wrapping film cut to size, with solvent or glue already applied to edges if the film is non-heat-sealing. A quick hand motion makes the preliminary wrap around the package.



7

*Partially wrapped package is fed into the machine where end folds are made and the adhesive- or heat-seal is completed.*

is placed on the film by the machine as the sheet is cut and before the preliminary hand overwrap is made. The cut sheet, with or without adhesive, feeds through on a flat platform of the machine facing the operator. The operator simply places the tray of produce on the far edge of the sheet of film and folds the sheet over. She then places the package in the machine, where the end folds are made and sealed automatically, either by heat and pressure or—in the case of applied adhesive—by pressure alone.

#### **Second year's operation**

The work during 1946 has been done at Lafayette in cooperation with Minardo Bros. Three stores have been used in different parts of the city. Country deliveries have been made from time to time. Up to the first of September, approximately 60,000 packages of 20 different products had been packed and distributed through retail channels. Less than 3% had been returned by retail distributors for all causes.

Aside from tomatoes, lettuce, spinach, parsnips, turnips, green beans and cauliflower, two other products packed have been in great demand in consumer packages. These are potatoes and sweet corn. Sweet corn was picked fresh each morning, carefully graded as to quality and condition of maturity. Four almost perfect ears were placed side by side in an open-faced, cellophane-wrapped tray. The corn was husked manually, and tips of the ears were removed to make the product even more uniform. When bulk corn sold at 35 cents a dozen, four packaged ears sold readily for 17 cents, or 51 cents per dozen. Care was taken in buying from selected growers, and the price given them was sufficient to warrant careful attention to picking. Four pounds of sized, washed, waxed potatoes, placed in a cellophane-top tray, sold at wholesale at twice the price of U. S. No. 1's. These potatoes were of higher quality, sized evenly, with five to seven in each package.

#### **Consumer survey**

A consumer survey conducted by Rose White, a Purdue nutrition specialist, has been made. During

the three weeks in which full time was devoted to the survey more than 350 consumers were interviewed. Only those products which were available in packaged form were included in the survey each day; however, if the product was available in both the bulk and the packaged form, the survey included both. Questions asked the consumers were:

1. Occupation.
2. Reasons for preference.
3. Whether they had previously used packaged fresh fruits and vegetables.
4. Their experience as to the keeping quality of the packaged articles as compared to the bulk.
5. Suggestions for improvements.

The interviewer learned that, in general, people who had given the packaged fresh fruits and vegetables a try had liked them. Most of the people who said they did not like the packaged products had never tried them. A few had been prejudiced against them by previous use of other brands which had proved not to be of consistently good quality. The most often repeated reasons for preferring packaged fresh fruits and vegetables to the bulk were:

1. Excellent quality of the packaged product.
2. Cleaner.
3. Easier to prepare for cooking because partially washed and cleaned.
4. Protected from flies and from handling by other people.
5. Time and effort saved in shopping.
6. Looked so pretty in the package.

From observation of the buyers' habits, the interviewer felt that the most important elements to be observed in packaging are: (1) quality must be consistently good; (2) packages must be attractive; (3) packages must be displayed attractively in the stores, and (4) there must not be too great a difference between the price of the bulk and the packaged product, if the quality is about the same.

Tests are now being conducted by the Departments of Agricultural Chemistry (*Continued on page 170*)



# British jam can that needs no opener

A new type of jam can is now appearing on the market in England. It is simplicity itself to open. No key or can opener is required—a slight pull on the lid, and off it comes. To re-seal, put the lid back over the top of the can, press lightly and it snaps back into position. There is no struggle with a can opener, no rough edges and no problem of re-sealing.

The practice of marketing jam in cans for home consumption increased considerably in Britain during the war years. At the moment two distinct methods of packing are in use. The first method is to fill the jam into a normal can for hermetically sealed food at a temperature of 180 to 190 deg. F., after which the loose end is seamed on immediately and the can inverted so that the hot jam sterilizes the end which has just been applied. The cans are then stacked and allowed to cool.

The other method, for which this new type can is intended, is to fill the cans at the same temperature and cover the top of the jam with a greaseproof paper tissue. The cans are then stacked and allowed to cool completely. When the jam is cold the snap-on lids are applied. If the jam is not completely cold before the cans are closed, condensation is likely to occur on the inside of the cover, which, in turn, may lead to the development of mold on the top surface of the jam. The reason for the appearance of mold appears to be that when condensation occurs, the drops of moisture formed fall onto the surface of the jam and dilute small patches to below the sugar concentration which inhibits the growth of mold spores. It is assumed that spores are always present and eventually gain access to the top surface of the jam, but in the absence of the dilution referred to, are unable to develop.

The lid is either:

- (1) A solid metal cover which allows the jam to breathe slightly, as by design it does not fit tightly on to the top of the can.
- (2) When British paper restrictions permit, an alternative closure consisting of a snap-on ring with an aperture of approximately  $2\frac{3}{8}$  in. diameter.

This aperture is closed with a special porous paper-board disc fitted in the ring from the inside, which gives a tight seal but allows the jam to breathe through the porous board and obviates condensation. The board used must not be either glazed or heavily sized, but a design can be printed on the upper side of the disc if this is required. Both forms of container can be supplied in plain or decorated tinplate. The bodies, whether for full cover or aperture closure, are identical—that is, lacquered internally and plain, lacquered or decorated externally. At the moment, the seamed-on and snap-

on covers can be plain or lacquered; at a later date the British hope to provide snap-on covers coated and decorated.

Advantages of the can as a container for foodstuffs are well known: the saving of freight and handling charges, the avoidance of breakage, the avoidance of contamination, protection against foreign matter getting into the contents after packaging and the avoidance of the necessity to clean the container before use because they are once used containers.

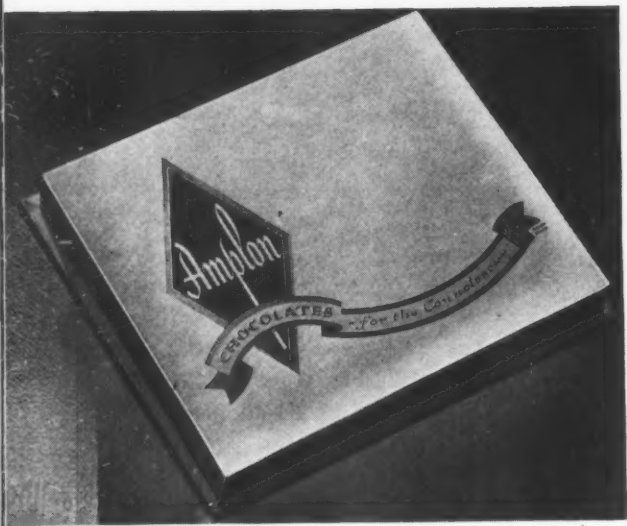
The new snap-on lid jam can has the additional advantage of not requiring a can opener, having no jagged edges or jam concealing lip after the can has been opened. Furthermore, it has a large filling orifice, constant capacity and, if decorated externally, obviates labeling. Above all, it has a re-seal closure which can be used again and again.

The jam will undoubtedly be used direct from an attractively decorated can of this type. There will be no aesthetic reason for putting the jam into a dish which, owing to normal household washing methods, can never be as sterile and, therefore, never as safe a container as the can. When empty, this container will be used by many housewives for sugar, spices, etc., and remain a constant advertisement for the jam producer.

CREDIT: Can devised and manufactured by the Metal Box Co., Ltd., London, Eng.

*Jams are being marketed in England in this new type of tin can with snap-on lid. The lid is removed by a slight pull, and does away with the need for key or can opener. Attractively decorated, the can has re-use value, since there is no problem of rough edges or re-sealing.*





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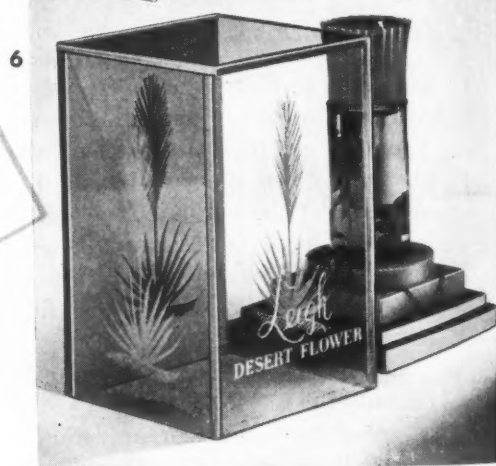
# Packaging Pageant



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**1** Forceful styling and application of trade mark for better shelf appeal as well as "rememberability" in the home were the design problems for this new chocolate package for Amplon, Inc., New York. Large white areas plus rich gold, partly embossed, and royal blue and pink is the color scheme. Design, Lucian Bernhard Studio, New York. Embossed wrap, Empire Lithographing Co., Inc., New York. Box, Belmont Paper Box Co., Brooklyn, N. Y.

**2** Bright three-color label for this bottle of Penetone liquid household concentrate cleaner has outstanding shelf appeal. In the red circle at top, the trade name appears in white within a black oval. Center portion of the label is black, while red coloring is repeated in the lower section. Black plastic cap is self-dispenser. Design, E. Leonard Koppel, New York. Bottles, Owens-Illinois Glass Co., Toledo. Closures, Plastic Engineering, Inc., Cleveland. Printing, Sun Press, Inc., New York.

**3** Reproduction of a children's playground swing forms a container for the new "Baby on a Swing" set of baby oil and talc. The individual products are in bottles designed to represent a baby in a swing with the rounded closure forming the baby's head. The set is in a paperboard box. Packages, Brooks & Porter, Inc. Bottles, Foster-Forbes Glass Co. Swings, American Globe Wire Works, Inc. Closures, Gibson-Jones Co., Inc., all of New York.

**4** One basic design and folding carton is used for packaging the entire line of plastic toys manufactured by Knickerbocker Plastic Co., Inc., Glendale, Cal. Bottoms and covers are in pink, blue and red, and scalloped awning edge on the covers ties in with the inside design. Boxes and design, Robert Gair Co., Inc., New York.

**5** New packaging for products of the Muffin Makin's Co., New York, emphasizes the family group idea and highlights the firm's brand name. Printed in four colors, the name of the product itself appears boldly across the center of each package. Boxes, Acme Folding Box Co., Inc., New York, and Eastern Display Corp., New York.

**6** White and gold form the color scheme for the hand-etched glass bottle and the transparent acrylic case for "Desert Flower," perfume by Leigh. Two sides of the case are decorated with tall desert flowers in white, which are repeated in gold on the white background side of the case.

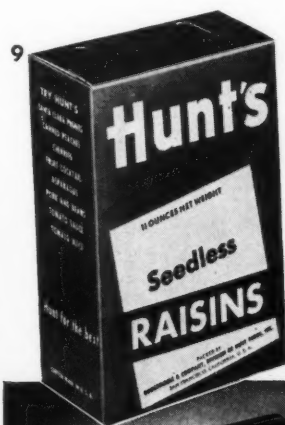
**7** Foil laminated to paperboard is used for the colorful folding carton to package the new shipping device made by Sullivan-Waldron Products Co., Seattle, Wash. Background coloring is magenta, and natural foil shows through for a realistic portrayal of the "Whipster." The white shield edged in yellow provides color contrast. Design, Erwin Wasey & Co., Inc., Seattle. Carton, Coast Carton Co., Seattle.

**8** Package for "Bathol" body refreshant was designed in terms of maximum simplicity and fundamental harmony. Shape of the bottle and design of the label combine to achieve these aims. The phenolic molded cap has a vinyl-coated liner and is gold-sprayed to produce a metallic effect. Package design, Beverly Towles, New York. Label design, Margery Markley, New York. Bottle, Swindell Bros., Baltimore, Md. Label, The Chittum-Kidd Co., Baltimore. Plastic cap, Owens-Illinois Glass Co., Toledo, Ohio.

**9** A family design was developed for the first packages of prunes and raisins to appear under the Hunt label. Only difference between the two packages is that the small raisin carton has tuck-in flaps while prune carton is glued to retain moisture. Wax paper liners are heat sealed. Cartons, Schmidt Lithograph Co., San Francisco.

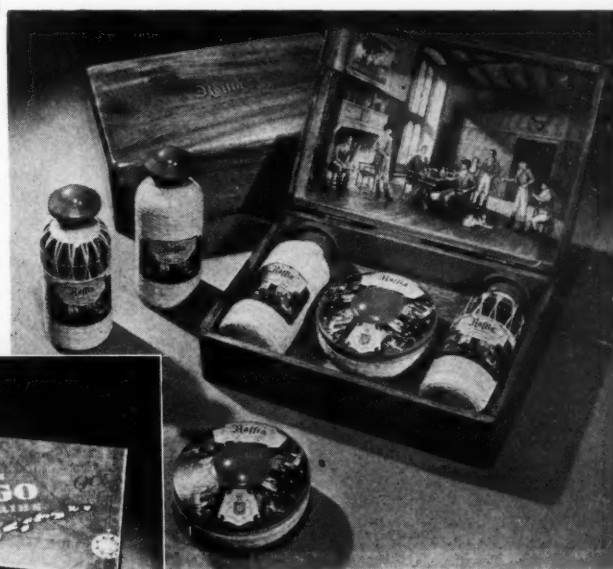
**10** A two-piece molded phenolic box holding three bottles of men's toiletries called Cargo forms a travel kit. The spirit of the name Cargo is carried out in the design on the lid which depicts the two halves of the world hemmed in by sailing ships. The kit is packaged in a chipboard set-up box which also carries out the geographic theme.

**11** Bottles, hand-wrapped with raffia in the Dominican Republic, give an appropriate effect for Raffia men's toiletries recently introduced by Huntley, Ltd., New York. The box is fine-grained wood with hunting scene in full color.



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**12** A new semi-circular container of acetate with foil-coated paperboard base and ends has been used for Reliance Brush Co.'s new "Glo-Brush" instead of the conventional oblong box for packaging brushes. The container follows the contours of the half-rounded brush. Design, Plastic Artisans, White Plains, N. Y. Acetate (Vuepak), Monsanto Chemical Co., Springfield, Mass.

**13** This gift item of five brands of smoking tobacco put out by the Christian Peper Tobacco Co., St. Louis, is packaged in a leatherette re-use container. When the individually wrapped 4-oz. packages of tobacco are removed, the container becomes a tie box or general utility case. Container designed and produced by Harlich Mfg. Co., Chicago.

**14** Loft Candy Corp., Long Island City, N. Y., has introduced a "Happy Birthday" gift box for candies, designed to resemble a birthday cake. Made of paperboard, the box has a "Happy Birthday" greeting cleverly embossed on the top. A beaded festoon treatment around the border and sides realistically resembles icing. Box wrap printed and embossed by Bendix Paper Co., Inc., New York.

**15** For the four smaller boxes of Wallace Crown candies, paper coverings were designed for impulse sales and carry appetizing reproductions of the confections in four colors. The larger box of Wallace Regent chocolates has a more elaborate cover. Its background is red with crowns printed in gold and the center design is embossed. Designs, Summon & Summon, New York. Boxes, Foster & Cross, Brooklyn. Printing, Bendix Paper Co., Inc., New York.

**16** A fold-in, tuck-top carton with glued front side is used to package the new Car-Vac vacuum cleaner for automobiles. The folding carton is printed in brown and black on bleached kraft board. Pasted on the inside cover is an instruction sheet explaining how to install the attachment. Die-cut holders support the Car-Vac and its tubing is held in place by a protector across the center. Carton, Wayne Paper Box & Printing Corp., Ft. Wayne, Ind.

**17** Castleberry's Food Co., Augusta, Ga., has introduced this Family Package for its five sauces. Printed in red and black on a yellow background, the folding carton has a die-cut window through which the five bottles and labels may be seen. Carton, The Atlanta Paper Co., Atlanta, Ga.

**18** Name of the product inspired the development of this imaginative package for Marie Earle's new "Ballerina" perfume. The gold-troughed bottle nestles inside a miniature white satin ballet slipper. The white and gold set-up box is lined with royal blue satin and secured with a gold metal lock.

**19** Paperboard covered with velvet makes the box used as the container for this gold-plated perfume dispenser. The bottom of the box is fitted with a paperboard tray covered in velvet and indented to the form of the dispenser. Contrasting with the dark blue velvet is the white satin used inside. Box, Samuel Nere & Co., New York.

**20** "Dog-metics," cosmetics for dogs, is the latest in boxed gifts for the canine member of your family. A four-color, set-up paperboard box is used. Against a pink and blue striped background appears the reproduction of a beautified dog. Coat dressing, shampoo and flea powder are in plastic-capped bottles. Box, Belmont Paper Box Co., Brooklyn, N. Y.

**21** A metal cap provided with an applicator forms the closure for this bottle of insecticide paint by Nash & Kinsella Laboratories, Inc., St. Louis. A film innerseal applied to the bottle opening protects against leakage and tampering. Bottle, Obea Nester Glass Co., East St. Louis, Ill. Label, Greeson Co., St. Louis, Mo. Cap and inner seal (Filma-Seal), Ferdinand Gutmann & Co., Brooklyn, N. Y.

**22** Potato salad is the first of the products by Noble Foods, Inc., Chicago, to be vacuum packed in this type of glass jar and metal closure. The colorful label printed in red and green gives a fresh appearance to this "Kitchen Fresh" food. Glass, Hazel-Atlas Glass Co., Wheeling, W. Va. Cap, Anchor Hocking Glass Corp., Lancaster, Ohio.





15



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*Packaging Pageant*



18



19



21



22



# AUTOMATIC STORE

...will it change  
your package?

The answer to the question of whether packages will have to be changed to meet the requirements of the automatic store appears to be "No," if the experience of the Grand Union Co. at its now successfully operating Food-O-Mat in Ridgewood, N. J., is any criterion.

All types of packaged food products in cans, jars, bottles, bags, cartons and boxes are displayed at this store in 76 ft. of gravity-feed shelving, behind which stocks are replenished by two employees from Monday to Thursday and by three on Fridays and Saturdays.

After several months of operation, the company claims there has been not one instance of breakage or package failure due to this new type of "automatic" merchandising. In fact, products in bags and other packages normally considered more difficult to handle seem to stand the ride down the chutes better than they do conventional store wear and tear.

Even though cans and glass packages roll on their sides down the chutes, consumers appear to have no difficulty in reading the labels on their sides, as is required by this new method of stocking merchandise.

The Grand Union Food-O-Mat is covered by patents issued to L. P. Shield, vice-president, who is planning to introduce it in other food stores of the chain as soon as arrangements for construction can be made. No plans, however, have been announced whether the development will be offered to operators of other food markets.

Should this new method of super-market operation gain widespread acceptance, however, it is conceivable packers of canned and glass-packed goods, which must necessarily roll on their sides, might consider ways of applying labels for horizontal reading, although this would be a problem as consumers would probably still prefer to read them vertically on kitchen shelves.

Approximately 1,700 grocery items can be displayed in the 76 ft. of space at the Ridgewood Food-O-Mat, which is comprised of 22 units, each 41 $\frac{1}{4}$  in. wide. The bottom row of packages is about 11 in. above the floor; top row 5 $\frac{1}{2}$  ft. above the floor and about two feet back from the line at the base.

The packages stocked from a 5-ft. wide space in the rear are placed on chutes designed in the form of in-

*More than 1700 packaged items are stacked in 76 ft. of space on gravity feed shelving stocked from rear. Every type package is handled. Glass jars and cans roll on their sides. Will this demand horizontally printed labels?*

verted aluminum T sections which can be spaced at intervals on the shelving to accommodate any size package. Each chute ends with a stop provided by a price card holder placed at the end of each T section. These holders are only 2 in. long, so that an open space at each side makes it easy to grasp a package. Gravity control is governed by the degree of the incline at which the T sections are placed. Cans and glass containers require a very slight incline to slow the progress of the roll. Cartons require more slide and are placed on chutes with greater incline. They can also be made to slide more easily by the use of Marlite, an enamel-surfaced board, placed between the T sections.

The number of packages that can be placed in each of the 22 units varies with the size of the packages. One unit will hold 45 cereal cartons, but 140 jars of strained baby foods. The size of the packages also governs the number of packages that can be displayed across the units. One unit may accommodate 14 spices across, while it will show only four to eight larger packages.

Standardization of container sizes within various







(BELOW.) Front view of baby-food section shows how price holders act as stops for chutes over which packages roll. Slight incline is used to slow action for cans and jars. Cartons and bags require greater incline of chutes.



(BELOW.) Rear view of baby-food section shows arrangement of adjustable aluminum T-sections which form the chutes, so that any size package can be handled. Items are stocked from this side from a five-foot corridor.



product groups would be an advantage for this type of store operation, Grand Union believes, since it would then be possible to use the maximum amount of space in each of the shelf units. If all pickle jars were the same size and shape, for instance, and designed for a definite number to fit across the unit, there would be no waste of selling space. If the jars were of such size that the shelf units would accommodate, say, seven jars across and a fraction of the width of the eighth, then the fractional space would be waste, because the eighth jar would not fit.

#### Standardized shapes, sizes

Standardization, however, is probably wishful thinking. Container sizes and shapes often change with economic conditions. During the war container sizes were limited by Government order. In good times consumers have money to buy in larger quantities and sales unit sizes are larger. When money is scarce the trend is to smaller sales units and consequently smaller packages. With the adjustable T sections, however, the Food-O-Mat can handle any size package, but it would be advantageous if a specific number in each product group would fit across a section unit without waste space.

Eleven return spaces are placed at intervals in the base of the units so that if a customer picks up the wrong package or wishes to look at a product, but decides not to buy, she may place it in the return slot.

It can then be restocked from the rear with less chance of it landing in the wrong shelf, the company claims.

During a pilot plant operation at Carlstadt, N. J., a survey indicated that consumers are enthusiastic about the new arrangement. Time required for shopping is cut about one fourth; shoppers like the elimination of walking through numerous aisles required to see both sides at once. To pass the same number of items in the usual arrangement the shopper would walk about 235 feet. The saving in the Food-O-Mat is about  $\frac{2}{3}$  of the customer's walk. There is no cluttering up with boxes since all stocking is done from the rear. There is no danger of merchandise becoming stale and no opportunity for dust to accumulate since only two or three packages are exposed at one time. Conservation of space is another big advantage. The cereals, for instance, which occupy about 11 ft. in this arrangement would occupy about 38 ft. in the conventional self-service store layout.

Each food section is clearly designated by illuminated signs above. Cove lighting casts continuous light on the packages so that they are easy to locate. Noteworthy, too, is the effect of this arrangement on package design. Family designs which form clear-cut patterns in mass display are more forceful than those which do not—a point to be remembered when the package must do the greater part of the selling job. There is little place for point-of-sale display material in this form of merchandise arrangement.

*Cereal section occupies one-seventh of the space taken up in conventional super markets for such products. Package family designs give best over-all display effect. Note return slot in base, where customer may replace the items she has picked up by mistake or which she wanted only to examine.*







*Transparent cylinder with bubble motif is appropriate setting for Roma Estate Champagne. Seagram container helps dealer to make a two-in-one sale. Cresta Blanca package has cardboard base and a cover of printed acetate.*

# Christmas spirits

...back in gift packs



**W**ine shops and packaged liquor stores are taking on a prewar appearance this month. With restrictions off decorative materials, many former leaders in gift packaging of wines and spirits are again presenting their products in eye-catching packages to attract Christmas shoppers.

Rigid transparent plastics are among the favored materials, according to reports about early arrivals on holiday counters.

Distributors of Seagram's whisky have adopted a rigid transparent acetate container that holds two "fifths." The box is used for display in stores and, as an impulse item, helps the dealer to make a two-in-one sale. While the package is being used exclusively for Seagram's product, Seagram Distillers are not furnishing it. Distributors have made the arrangement and have obtained the use of the Seagram crest.

Cresta Blanca Wine Co. uses a transparent package that promotes the sale of four bottles of wine. This

container has a set-up cardboard base, the top side of which is flocked and recessed to accommodate the four bottles. The rigid cellulose acetate cover slides over the top, giving maximum visibility. A red ribbon is fastened to the cover. A folding stand on the back provides an easel for display.

Roma Wine Co. provides an appropriate setting for Roma Estate Champagne, comprised of a cylindrical rigid transparent container enlivened with magenta ribbon, silver band and bubbles, a color scheme suitable for year-round gift sales. An interesting feature of the Roma container, made of acetate, is its base made of metal with rolled edges.

**CREDITS:** *Seagram package, fabricated by Crystal Tube Corp., Chicago. Cresta Blanca box, made by Design Center, Inc., Flushing, New York. Material for both, Vuepak, made by Monsanto Chemical Co., plastics division, Springfield, Mass. Roma package, fabricated by Central States Paper & Bag Co., St. Louis, Mo.*





1

Christmas shopping is the theme of this full color window display for the winter season distributed by P. Ballantine & Sons. A bag full of Ballantine's under the man's arm and background copy, "it's in the bag," promote sales of the product. Easel-mounted, the display is made in two sizes for windows as well as interiors. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.



2

A new display carton for Van Houten's cocoa has been made available to retail grocers throughout the country by the H. J. Heinz Co., distributors of the product. Following the general color scheme and design pattern of the package, the display sets up into a compact counter merchandiser. The carton is a self-selling unit for 1/2-lb. packages only. One dozen packages and one of the display cartons are packed to the case, leaving six extra packages for refill. Display carton, Robert Gair Co., New York. Shipping case (not shown), Eastern Corrugated Container Co., Clifton, N. J.

Two new counter units have been adopted to feature the complete line of Peggy Sage manicure implements, just recently back on the market after a wartime vacation. The one on the left is of Vermont maple with a Swedish blond

3



finish. The tray holding the implements is blue flocked and packages are stocked in a series of drawers in the back for quick access. The space saving unit at the right is acrylic and shows a complete line of the tools without storage space. Wooden display, J. J. Einhorn Co., New Haven, Conn.

The new easel-mounted counter or window display promoting Tender Age medicinals by the Nyal Co. of Detroit, incorporates a shelf space for showing five products within the cutout of the display itself. To round out the selling features, booklets have been prepared for counter distribution. Lithographed in four colors, the entire unit measures 16 by 18 in. Display lithographed by Zipprodt Co., Chicago.

Sterling Plastics Co., Union, N. J., uses this easel card to merchandise a fast-selling 10¢ item—an improved pencil sharpener, the body of which is molded of polystyrene. Cut from a single piece of board, the card mounts two dozen pencil sharpeners in die-cut slots—12 in back, where they serve as reserve stock (below), and 12 on the display face (above). Thus, until a lot is half sold, the display face may be kept constantly filled. The back of the card is used for a





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selling message to the dealer and suggestions for setting up and using the display. The card may be used as a window piece, a counter salesman or it may be hung on the back wall. Display, Keystone Folding Box Co., Newark, N. J.

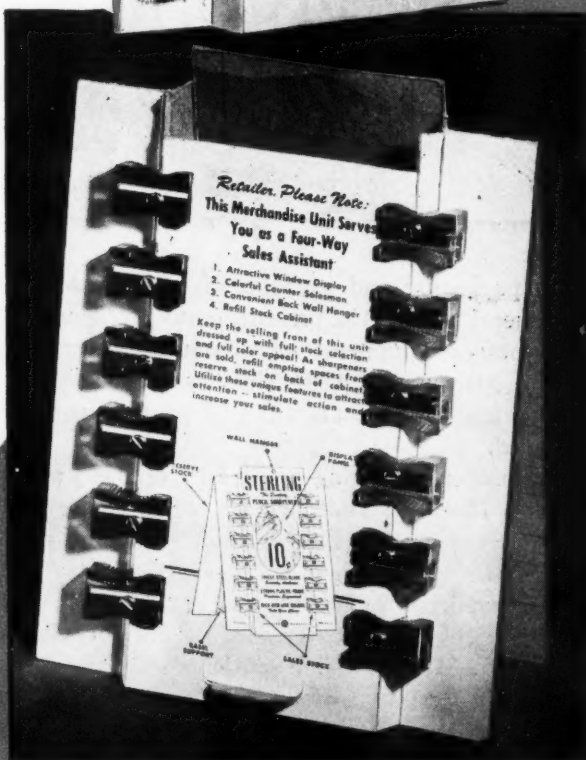
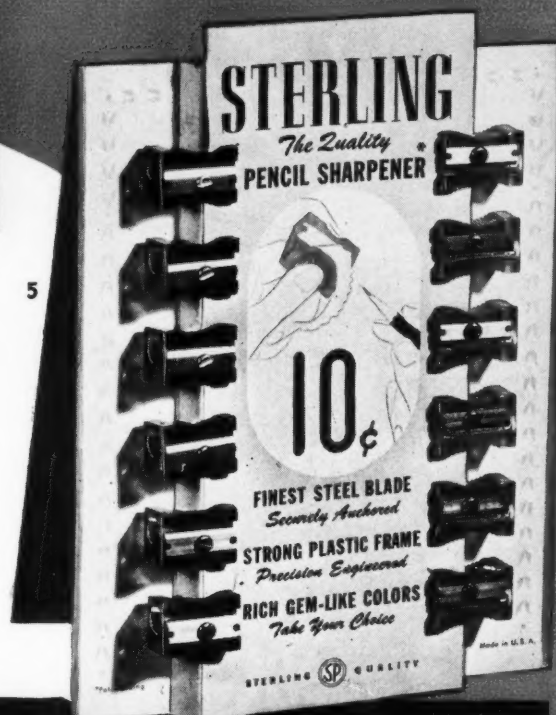
6 Santay Corp., Chicago, employs these individual and display cartons in merchandising its trim Santay EasyLite flashlights. The one-piece pinch display carton, holding three of the lights, is utilized as a counter unit to facilitate demonstrations of the "switchless" feature—one of the selling points of the light. After examining the light on display, the customer receives a fresh product packed in its own reverse-tuck carton. This carton carries diagrams and information explaining how the flashlight works. Both cartons are printed in black and red on 20-pt. yellow, clay-coated, news-back board, giving the effect of a three-color print job although they are run two-color letterpress. Forty-seven of the individual boxes plus one three-unit display are packed in a corrugated case for shipment. Cartons, Container Corp. of America, Chicago.

6



# DISPLAY GALLERY

5







*Left. Packer is completing the placement of filler pieces used in carton for protecting a small motor.*

*Above. A similar type of pack showing liner pieces. Filler pieces used on top and bottom can be made of lower grade material than those that are creased.*

## G.E. shipping packs

### ... specifications and procedure

by P. O. Vogt\*

The packaging and packing of apparatus for the General Electric Co. presents many problems, since the types of equipment manufactured cover a wide field. Consequently, parts which range in weight anywhere from less than an ounce to many tons must be packaged.

The proper packaging or packing of these parts requires a thorough knowledge of what makes up the part. Metal covers of some kind usually conceal the mechanism, which might be either of a very delicate nature, requiring the utmost care in packaging, or very rugged in construction, for which a minimum amount of packing is required for protection. Thus, packing and packaging has divided itself into different categories, each of which covers a certain medium or specification. These groups are manufacturing specifications for cartons and filler pieces; corrugated cartons; filler pieces; wooden boxes (wirebound, plywood and

dimension lumber); crates; sheathed crates and specifications for palletization.

#### Cartons and filler pieces

The composition, thickness, weight and Mullen tests of faced corrugated boards from which the combined sheet is manufactured are shown on a table in the specification for containers, pads, filter pieces, etc. This table (Table I) includes board designation, composition, thickness of board, weight per thousand square feet and Mullen test. There is also shown on this specification a table (Table II) with various combinations of board, freight classification, ratings and box maker's guarantee. Covered in detail are instructions and requirements for various styles of containers, printing, dimensions, taping, packing and marking, making over shipments, approval of samples and rejections.

Use of the table to specify a certain carton—for ex-

\* General Electric Co., Fort Wayne Ind.



TABLE I—BOARD COMPONENTS AND DIMENSIONS

Board designation	Composition	Approx. thickness, in.	Wt., lb./1,000 sq. ft.
A	Chip	0.009	26
C	Chip	0.016	56
D	Straw	0.009	30
F	Jute	0.012	46
K	*FK	0.009	26
L	*FK	0.010	37
N	Chestnut	0.009	30
1	*FK dry finish	0.014	38
2	Jute	0.016	62
3	Jute	0.030	100
6	*FK water fin.	0.016	52
7	*FK water fin.	0.023	69
8	*FK water fin.	0.016	62
9	†Cylinder kraft	0.030	90
10	*FK dry fin.	0.016	42
12	*FK water fin.	0.030	90

\* All sulphate Fourdrinier kraft.

† All sulphate Cylinder kraft.

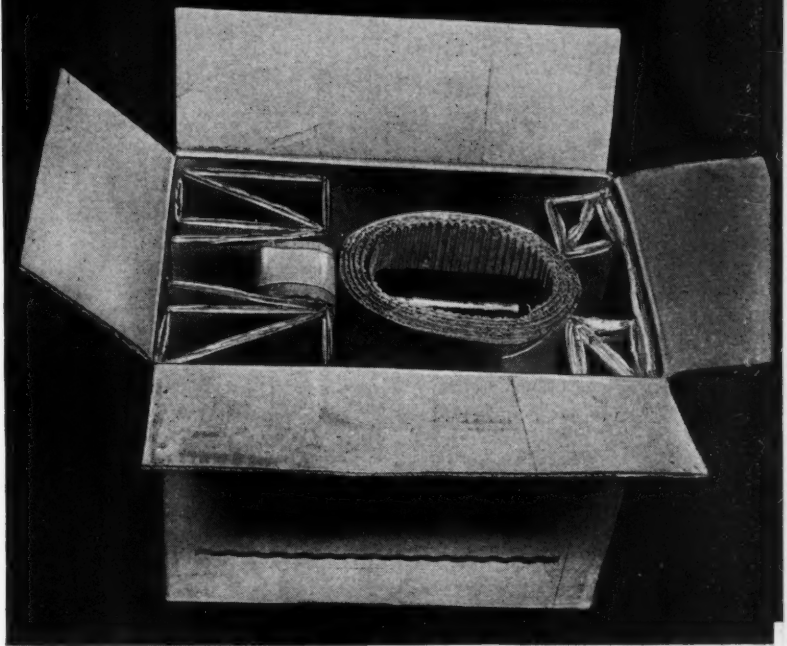
‡ 5% minus tolerance allowed.

ample, made of 200-lb.-test Fourdrinier kraft with kraft corrugations—is made by looking first in the composition column and finding “dry-finish Fourdrinier kraft,” and then finding “0.016,” the required thickness for 200-lb.-test material, in the thickness column. The board designation column is then checked for the board number. This number on the specification is 10. Then, the designation for 0.009 kraft is found to be “K.” The combined boards result in a specified #10K10 material. This specification has assisted both General Electric and the box manufacturer, and a mistake seldom occurs.

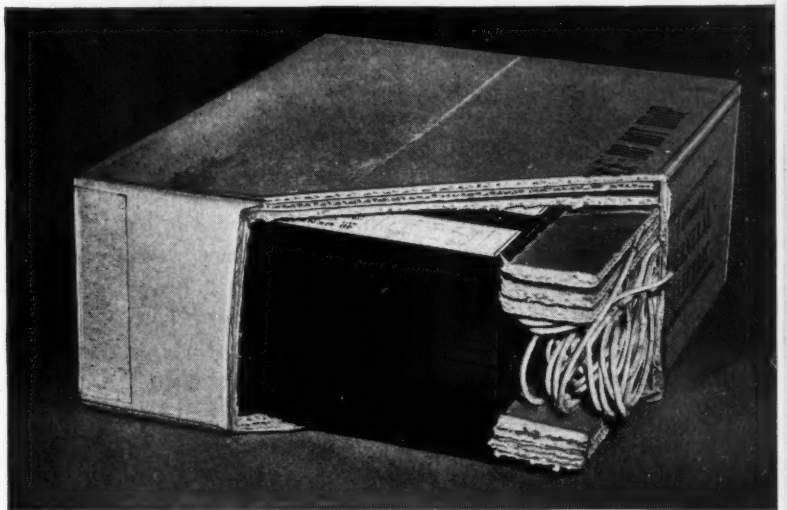
#### Corrugated cartons

Before selecting the style and test of a corrugated carton, the apparatus or part to be packed is taken into consideration. Weight is an important factor since it governs the test of carton that must be used. Regular slotted cartons are used if at all possible, since they are more easily manufactured and cost less. They are also the only style, with the exception of the three-piece slide style, which is permissible for freight shipments. There are times when a carton must be made of heavier material than is required by the Consolidated Freight Classification because of the nature of the article to be packed.

General Electric has made a thorough study of the qualities of various kinds of liner board, since quality and workmanship go hand in hand in making a good carton. Experience has shown that selection of the tape is very important because that is usually the weakest part of the carton, and poor adhesion of the corrugations to the liners has proved bad from a rigidity and carrying standpoint. The test report used for these liner boards gives the temperature and humidity the day the test was made, box number, material specified, vendor, material received, order number, manufacturer's date, box maker's certificate, average Mullen



Corrugated pads of heavier weight material are used for forming squares. Photo shows how these square creased pads are used for reinforcing corners of the container.



Corner removed from heavy case illustrates how fluorescent transformers are protected against damage and shock.

Wood box with side removed shows construction and the manner in which apparatus is secured to the container.

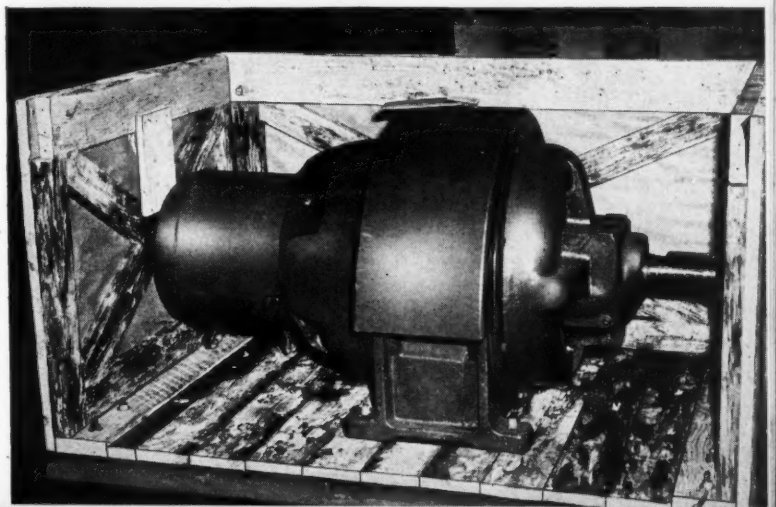


TABLE II—PROPERTIES OF BOARD COMPONENTS

Combined board*†	Freight classification rating		Puncture test units‡,§
	Mullen test, lb.	Min. combined weight of facings	
KKK	125	52	135
1K1	175	75	200
2DF	175	106	175
2D2	200	124	210
10K10	200	84	215
12K10	275	138	325
6L6	200	104	275
7K7	275	138	325
3D3	350	200	350
12K12	350	180	375
10KKKK	200	92	250
10KKK10	275	110	350
10K10K10	350	126	425
12K10K12	500	222	600
12K12K12	600	270	700

\* The combined boards as shown in the preceding table are given as illustrations of the more commonly used combinations of boards but are not meant to cover all the combinations which may be used from boards listed in the first table.

† In all combined boards where kraft (K) is specified for the corrugated sheet, straw or chestnut (D or N) may be substituted by the manufacturer upon approval by the purchaser.

‡ Board giving puncture test results below these values will be found to be of sub-standard quality because of poor adhesion, loose liners, crushed corrugations, under caliper and similar defects.

§ Values given for single wall board are for A flute and for double wall board, AB flute. 10% lower values will be acceptable for B flute, single wall and BB flute double wall.

test, average puncture test and a space for comments.

Temperature and humidity affect the test of corrugated material, so storage in a space with the proper humidity is important, especially in heated buildings during the winter months. The board dries and cracks along the score line. This is more prevalent in double-wall than in single-wall corrugated board.

Two-piece and three-piece slide-type cartons are generally used for inner packs. They have the advantage over the regular slotted carton, when packing parts to be stored in shelves, since they can be opened easily. It has proved very necessary, however, to know thoroughly the product to be packed before selecting the type and grade of carton.

### Corrugated filler pieces

Experience has shown that selecting the filler pieces to protect properly the apparatus or part to be packed is as important as selecting the carton, and consideration of their design is especially important when specifying the material for their manufacture. For example, a corrugated pad used for cushioning purposes, usually placed at the top and bottom of the carton, does not have creases and can be made of low-grade material. On the other hand, creased corrugated pads forming a square and having one crease that goes across the center require a higher quality of material if the part to be packed is heavy. If the part is light in weight, the quality is not so important. Top and bottom pads should be the full length and width of the carton, since they assist greatly in reinforcing the carton if subjected to corner, end, or side drops. The creased pads give cushioning as well as protection to the part.

There are times when it is necessary to pack parts having a fixed tolerance. These parts might be very difficult to pack, thus requiring filler pieces so positioned inside the part that there would be a slight pressure against the outside. This method has a tendency to keep the apparatus within the allowed limits. Filler pieces, which in this case are placed between the outside of the apparatus and the inside of the box, should be so designed that they will absorb the shock and at the same time re-inforce the corners of the box.

Corner re-inforcement is very important, since it greatly assists in preventing the crushing of the corners, which in some cases would result in damage to the apparatus. If at all possible, voids are eliminated, as they sometimes cause trouble in stocking and also cause the filler pieces to fail. The directions of the corrugations are also specified, stating whether they run the short way or the long way of the filler piece. If rigidity is required, the flute direction is specified as vertical with the box, and horizontal if end re-inforcement is required.

Several years ago General Electric and a corrugated box manufacturer developed a packing piece first used to wrap lamp bulbs but later used for wrapping parcel



GE was a pioneer in palletizing. These motors on pallets in warehouse are not banded. Bands would loosen because of weight of top pallets. Bands are put on just before pallets are put in railroad car.



post shipments as well as for many inner wrappings of miscellaneous items. This wrapper is made with kraft paper and corrugated material, with the corrugated material glued to the kraft but not covering the entire sheet. Approximately three inches of paper on each side of the corrugated material are folded inward and tucked to the inside to re-inforce the ends when the article or part is being wrapped. These wrappers can be used in a number of places and are less costly than the cartons which they have replaced.

#### Wooden boxes

All types of wooden boxes, consisting of nailed boxes made with dimensioned lumber, wirebound boxes and boxes made of plywood or other prefabricated material, are used by General Electric in packing apparatus and apparatus parts.

The nailed wooden shipping boxes are made in five styles. The Style No. 2 box has two vertical and two horizontal cleats at each end; Style No. 2½ has two vertical and two horizontal cleats, the two vertical cleats being notched; Style No. 3 has mitred corners and two vertical and two horizontal cleats. (These boxes can be used if the proper thickness of material is specified for weights up to 1,000 lbs.) Style No. 4 has two vertical cleats placed on the outside, and Style No. 5 has two vertical cleats placed on the inside of the box; they are used for packing material, the weight of which does not exceed 400 lbs.

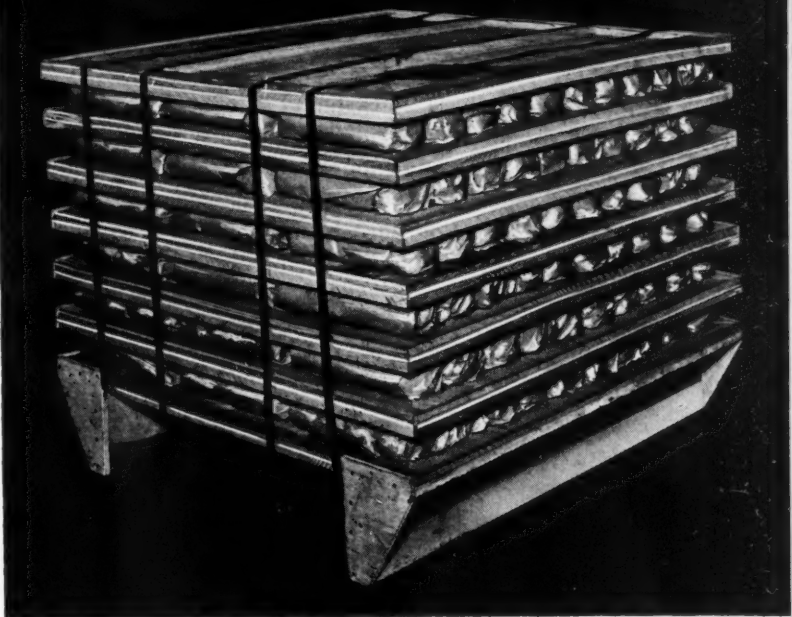
Each of these boxes has its application. The one commonly used is the Style No. 4, which has a three-way lock corner, meaning that the end, side and top are nailed together at the corners. Style No. 5 is commonly used in the packing of such apparatus as small generator sets and large motors. The base is recessed and the inside cleats are shortened at one end, to permit the base to rest on these end cleats.

The size of nails used in the fabrication of boxes for this equipment is, of course, very important. There are various nailing charts giving the size and number of nails required for various thicknesses of board.

Another factor that has had to be considered in this respect is that the material used in the box should be as light as possible in order to reduce the cost of transportation. The moisture content of the wood is also an important factor, since most woods have a tendency to crack or check when the wood is in the process of drying. This is particularly true after the wood has been fabricated into boxes. For example, it has been observed that wood sometimes cracks fairly close to where a nail has been driven, and that the cracks between boards have become as great as 5/8 in., even though the boards were together when the box was fabricated. Staggering of all boards on the sides and ends of the box has been found to result in maximum strength.

#### Wirebound shipping boxes

Wirebound boxes are made with re-sawed lumber, single-ply veneer plywood and other prefabricated materials. The weights packed in them must be taken into



*Pallet loaded with rotors for motors, banded and ready for shipment. Palletizing both raw and finished materials makes inventory fairly simple, the company declares.*

consideration, since the boxes must be constructed with heavier end designs, thicker materials on the sides and ends, or a heavier-gauge wire as the loads they are to accommodate become greater.

The regular cleated and wirebound boxes are made in several different designs—one with the cleats running horizontally and vertically; another with three battens, and still another with an all-bound end which is fastened to the side cleats by a looped wire. This type box is used for the packing of domestic and export shipments.

The staples used to fasten the wire to the mat should be long enough to get a good clinch, with 1/4 in. considered a minimum length of a good union.

#### Plywood shipping boxes

As every shipper and package designer knows, there are two types of plywood shipping boxes, known to the industry as Styles A and B. In the former style, the top and bottom completely cover the sides and ends, while in the latter there is a three-way lock construction, with the top being inside the ends and overlapping the sides.

Plywood used in these boxes is a good commercial box grade and is preferably water-resistant. The principle thickness of plywood used is 1/4 in., and the box is used to pack apparatus weighing from 150 to 350 lbs.

Again, the nails used in fastening the plywood to the cleats are long enough to permit a clinch of not less than 1/4 in.

#### Domestic crates

Domestic crates are intended to provide protection for apparatus usually mounted on and fastened to a base having skids while it is being handled, stored and



shipped. The base skids should be of such thickness as to give proper support and holding strength. The top frame must be strong enough to prevent sagging and to give sufficient nailing for the side and end slats, and the general construction must be strong enough to support the gross weight of the crate when held by grab hooks at the top. This also calls for side and end strength, obtained by diagonal slats on sides and ends. The corners are made with two vertical pieces; one on the end and one on the side. A vertical support in the center along the side has been found desirable if diagonals of a sufficient angle can be placed on each side of it.

If there is not enough space for the center support, a diagonal brace extending from one end to the other along the sides, or a cross brace, can be used. This depends upon the size of the crate, gross weight, how it will be handled and where shipped. Also, of course, the group of woods to be used has a definite bearing on the thickness of the wood. There are four groups of wood, set up to include species of woods that have similar characteristics important to box design.

These characteristics include compressive strength, density, nail holding power, stiffness and shock absorption. There are variations in the characteristics of wood in a given group; however, they are not so great as to interfere with the grouping of these species when applying them to box design. Nailing is extremely important, requiring the right length of nail to be used and proper placement to get the maximum holding power.

#### Sheathed crates

Sheathed crates are used for export shipments and long time storage. Their construction is similar to that of the domestic crates, with the addition of a floor on the skid between the bunks and the additional outside sheathing. Four clusters of five  $\frac{1}{2}$ -in.-diameter

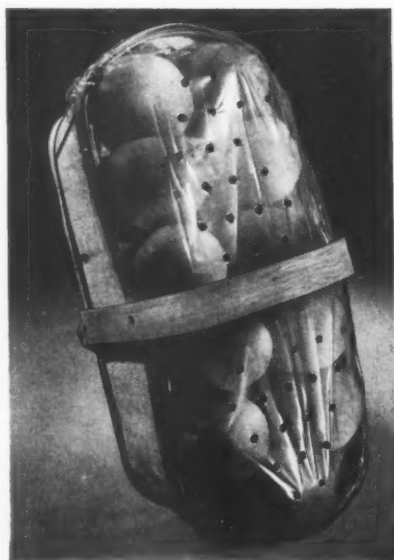
holes are provided in the floor for ventilation. The crate construction is usually heavier than that used on domestic; however, the same designs are satisfactory. The thickness of sheathing depends on the group of woods that will be used, and the weight of apparatus to be packed. Double tops are used with a piece of heavy waterproof paper between. The bottom layer runs lengthwise along the crate, while the top layer runs crosswise. These boards are nailed to the top frame between the two ends. Waterproof lining is not used between the inner members and sheathing if the apparatus is properly shrouded and ventilation holes placed at each end of the sheathed crate.

#### Palletization

General Electric was one of the pioneers in the pallet field. Pallets were used in all of the G. E. plants before the war for handling plant-to-plant, vendor-to-plant, plant-to-customer, loading, unloading, shop-to-shop, and intra-shop movements of both raw and finished materials.

The plant-to-plant movement consists of both raw and finished materials which are used either in the manufacturing of electrical products or assembled parts which are a part of another unit. The pallet method was very helpful in this respect, since the material usually was taken from stock directly to the assembly line, where it was placed directly into the unit, thus eliminating a number of handlings and possible damage. In addition, when large quantities of units are involved, vendors and sub-contractors have been asked to pallet raw materials or parts. This has proved beneficial to both parties. Cartons and wooden boxes containing finished products are loaded onto pallets from the ends of conveyor lines, and the cartons or boxes are placed in such a position (*Continued on page 168*)

## Tough, transparent cover for fruit baskets



Canadian research has developed a new clear vinyl plastic film cover for baskets of fruit. Perforated for ventilation, it gives attractive protection and shows the fruit in its true colors.

The Vinylite, shown on a basket of peaches, is  $\frac{1}{1000}$  in. in thickness; is perforated with  $\frac{1}{4}$ -in. holes, one to a square inch. Toughness of the material was one reason for selecting vinyl.

To apply, a single sheet is drawn under the handle of the basket, spread tightly over the fruit, and the over-lap forced under the wooden band at the top with a blunt paddle.

The film is shipped to cover manufacturers in rolls 36 in. wide. A specially built machine cuts it into 12-in. widths, perforates it and cuts it into 21-in. lengths, ready for use.

With this development, the red netting formerly employed has been banned by Dominion Government regulation for shipments between provinces. There was widespread complaint that the red netting was deceptive—made green fruit appear ripe.

CREDIT: "Rolite" cover and machinery, Rowe Packaging Co., Ltd., Toronto.

# Packaging Institute . . . eighth annual meeting

**P**ackaging Institute held its eighth annual conference November 25 and 26, at the Stevens Hotel, Chicago, with a registered attendance between 300 and 350, of whom perhaps 250 had made advance registrations. The program provided for three general sessions, luncheon meetings of three standing committees, a drug and pharmaceutical dinner, and industry seminars in eight different lines of business. The banquet, planned for Tuesday evening, was canceled due to the sudden illness of the speaker of the evening.

Before the meeting had been long under way, a rather obvious undercurrent of dissatisfaction was remarked by a number of those in attendance. Causes were (1) selection of Thanksgiving week for the meeting time; (2) discrepancies between the program as originally announced in October and that finally given; (3) remoteness of some of the talks from the field of packaging and (4) poor planning from the standpoint of timing. For example, the Tuesday afternoon general session, planned for 2:00 to 3:30, lasted until after 4:30, leaving inadequate time for some of the seminars. Special cause for disappointment was the cancellation of the banquet, a traditional feature of Packaging Institute conferences, which several times in the past have been successful and enjoyable affairs without any speaker. The socially inclined had to content themselves with the "brunch" on the opening day, the National Adhesives cocktail party Monday evening and the Institute cocktail party Tuesday evening.

Mason T. Rogers, Dewey & Almy Chemical Co., was elected president of the Institute to succeed Walton D. Lynch, of National Folding Box Co. Named vice presidents were George W. Von Hofe, New Jersey Machine Corp., and A. F. Stevenson of the Borden Co.

## MONDAY AFTERNOON

### General Session

Chairman, HENRY W. STEVENS, *Benj. C. Belner Co.*

Opening speaker was **Raymond Bill**, publisher and editor of *Sales Management* magazine, who indicted managed economy as the direct road to war and pointed to "liberty economy" as a guarantee of maximum benefits and freedom. Liberty economy, however, he pointed out, must be jealously guarded. Whereas managed economy controls and limits production, he went on, liberty economy encourages freedom of production, and teaches people the discontent which makes them want more and better things. Challenges face the advocates of liberty economy. The next few years will see the need for more selling and better distribution. Packages will need to have a high element of style and attractiveness to meet the challenge of better distribution because of the important role played by women in the marketing scene.

**H. E. Smoyer** of the law firm of Standley & Smoyer, followed with a discussion of labor relations. Mr. Smoyer discussed various one-sided aspects of present labor legislation, calling attention, for example, to the frequent inequities of required pay for unproductive time. He reminded his audience that the costs of "sympathetic" strikes cannot be made up and pointed out that a union could be voted in but not voted out of a plant. Employees, he declared, have the right of free speech, but the employers' lips are sealed. He insisted that labor relations should be given an important place on management agenda and advised employers to know their own rights as well as current labor practices, and concluded with a plea for corrective legislation to be administered by the courts instead of boards or bureaus.

**M. M. Zimmerman**, editor and publisher of *Super Market Merchandising*, in a talk which was one of the highlights of the meeting, discussed the topic, "What Modern Merchandising Will Demand of Packaging," and emphasized the role of the package in the self-service type of store. The package designer who designs packages sold through self-service outlets must know more than merely good design and economical production—he must prepare packages that can compete under the "sight-and-touch" system of selling. Mr. Zimmerman traced the growth of the supermarket from the barny structures of 1932 to the functional type of today that may have an annual volume ranging from \$100,000 to three quarters of a billion dollars. The operators of these 5,000 or more self-service units in the near future will expand and improve their stores because the "sight-and-touch" method of selling has revolutionized merchandising and packaging.

**D. D. Uong**, vice-president of the Fitchburg Paper Co., who recently returned from a visit to his native China, was assigned the topic "Far Eastern Trade Opportunities." Reminding his audience that we now live in a shrunken world, Mr. Uong remarked that the East is no longer far. Just as modern scientific packaging helped to shorten the war, he said, it can be used to increase our foreign trade in both directions. For instance, China can exchange her rare foods and delicacies for the tools and implements produced in the western world. Mr. Uong concluded with the declaration that there can be no satisfactory international trade until there is international peace and order.

### Eighth Annual Business Meeting

**WALTON D. LYNCH**, *vice-president, National Folding Box Co., and retiring president, Packaging Institute, presiding.*

President Lynch, in his annual report to the membership, cited the growth of the Institute from 232 members to 369 during the current year and reviewed various

activities of the organization that were initiated during his administration. Mentioned were:

- Appointment of a full time executive director.
- Active and aggressive membership campaign.
- Study of frozen food packaging with food technologists.
- Launching of "The Packet," an Institute publication.
- Advisory Council's "16 Case Studies."
- Enlargement of Technical Committee activities.
- Survey on Films, Foils and Sheets.
- Organization of Committee on Standards and Practices.
- Development of committee to handle publicity.
- Affiliation with the British Printing and Allied Trades Research Association.
- Activities in Labor Relations.
- Revision of Institute by-laws.
- Publication of historical material on boxes, plastics and machinery.

Another activity contemplated was the International Packaging Exposition, which by vote of the Board of Directors was canceled. Mr. Lynch put in a plea for its implementation in the future as a logical and practical function of the Packaging Institute.

New directors elected were:

- E. H. Balkema, Colgate-Palmolive-Peet Co.
- E. G. Kuhn, president, Consolidated Packaging Machinery Co.
- Karl E. Prindle, The Dobeckmun Co.
- G. W. Reese, American Can Co.
- Carl E. Schaeffer, Stokes & Smith Co.
- A. F. Stevenson, The Borden Co. (re-nominated).

Committee chairmen ratified were:

- Publicity: Kenneth C. White, Owens-Illinois Glass Co.
- Technical: C. A. Southwick, Jr. (to continue until successor is selected).
- Advisory: J. D. Malcolmson, The Robert Gair Co.
- Standards and Practices: A. F. Wendler, E. I. du Pont de Nemours & Co., Inc.

The members, by unanimous vote, ratified the action of the Board in increasing dues from \$50.00 to \$75.00.

#### MONDAY EVENING

##### Drug and Pharmaceutical Dinner Meeting

Chairman, C. O. KENDALL, E. R. Squibb & Sons

H. E. Nack, Sharp & Dohme, Inc., summarized a questionnaire on procedures of applying labels. Also discussed were relative merits of washing and air-blowing of bottles, emphasizing such factors as conditions of storage in the user's plant as well as the type of product bottled. One user reported the successful application of Sterilamps on the filling line to maintain sterility of bottles prior to filling and capping.

A spirited discussion centered around the relative merits of printed ampules compared with those labeled with paper. Dr. N. E. Foss, Calco Chemical Division,

in reviewing printing methods stated that silk screen, though expensive, appeared most desirable process for ampule printing. The pharmaceutical industry seems to prefer printing ampules after the filling operation in order to eliminate special inventory problems. Pre-printed ampules must withstand all conditions of sterilization operations, etc.

The problem of bottle leakage, it was brought out, is particularly serious with molded caps of deep skirt design, due to dimensional instability, particularly under high humidity conditions. Solution offered: A suitable liner with better torque control.

A new machine, it was announced, will soon be demonstrated by the New Jersey Machine Corp., which will apply thermoplastic labels to bottles at a rate of 300 per minute.\* On folding box production, W. F. Deveneau, National Folding Box Co., commended the practice of supplying box manufacturer with an actual sample of the product and essential data on storage, uses, etc., and letting him work out the specifications.

Drying time required for cellulose bands was termed a production bottleneck, although batteries of infra-red lamps can shorten the drying period. Desire was expressed for more efficient equipment to handle tablet and capsule counting and filling. Other subjects touched on: Gas transfer of plastic bottles; coding of drug packages; automatic cottoning of tablet bottles; closures for export shipment; tamperproofing of packages; ampule filling and sealing; maintenance of uniform volume for liquid-filled containers; removal of glass spicules from ampules; protective inner coatings for fibre drums, and the labeling of collapsible tubes after filling.

#### TUESDAY MORNING

##### General Session (Foods)

Chairman, MASON T. ROGERS, Dewey & Almy Chemical Co.

Mr. Rogers acted as chairman of this session in the absence of A. F. Stevenson, The Borden Co. According to earlier program announcements, the session was to have been under the chairmanship of Dr. L. V. Burton, editor, *Food Industries*.

Col. Paul P. Logan, director of Food Research, National Restaurant Assn., initiated the afternoon's series of addresses with a review of the food processing outlook and its relation to packaging. Col. Logan declared that the package cannot be divorced from the total subject of food preservation and that positive data on the limitations of various packaging materials, as well as their advantages, would do much to insure selection of the most appropriate type of package for specific food applications.

He said there was grave need for standardization in the packaging of frozen foods and suggested that the packaging industries should formulate recommendations on the packaging, storing and transportation of frozen foods, bearing in mind that the product must be held at 0 deg. F. or below at all times.

\* See "Thermoplastic Labeler," MODERN PACKAGING, September 1946, p. 123.



Col. Logan pointed out that 70% of all our food is now eaten fresh, predicting a tremendous change during the next few years in the handling of fresh foods, influenced largely by the present trend to pre-packaging.

**Dr. Nelson Allen**, Technical Service, Cellophane Division, E. I. du Pont de Nemours & Co., Inc., spoke on "Fresh Produce—a New Field for the Packaging Industry." Surveys cited by Dr. Allen indicate that self-service selling of produce effects a reduction of approximately one-third in operating costs and also promotes impulse buying. Interviews with 1,300 supermarket shoppers showed that 38% of their purchases were made "on impulse" and that 13% of the brand choices were made at the point of purchase.

According to Dr. Allen, pre-packaging of fresh produce is complicated by the respiration rate of the food, with rapid turnover and proper control of temperature, two of the greatest assets in maintaining the appearance and flavor of the produce. Dr. Allen said that visibility packaging appeared to be imperative on this type of product and that the package must also be easy to handle, durable, capable of display and must stimulate the desire to purchase.

Films now available lack sufficient water-vapor transfer to permit normal respiration of most produce items; this problem is overcome by means of small openings in the package. Fogging, one of the principal problems of transparent packages, can be overcome with proper control of temperature.

Revealing figures on consumer acceptance of pre-packaged fresh fruits and vegetables were supplied in an address by **Sidney K. Bradley**, Director, Chain Store Sales, Union Bag and Paper Co. Mr. Bradley's figures were based on a survey conducted by Fact Finders Associates, the purpose being to ascertain whether pre-packaging is desirable from the standpoint of merchandising, what the cost picture is and what procedures are most desirable.

Of 790 store managers interviewed, 85% said that pre-packaging would improve the merchandising of fresh fruits and vegetables, while 7% gave a negative reply and 8% had no opinion. Other questions asked of store managers, with the percentage of affirmative replies, were as follows: Would pre-packaging cost too much?—23% (50% declared that it would not). Would it increase traffic?—89%. Cut waste?—68%. Increase sales?—51%. Eighty-three per cent of the managers said they would sell as much produce, or more, when offered at the same price as in bulk, and 72% said they would sell as much, or more, even if there was a 1¢ price handicap on the pre-packaged items.

According to Mr. Bradley, produce sales now amount to approximately \$200,000,000 annually in the United States. Allowing approximately 2% for the cost of packaging materials alone indicates the potential market for the packaging industry in this new development.

Of 2,367 store customers questioned in the survey, 63.8% declared they would prefer to purchase pre-packaged produce, with weight and price marked, over the purchase of the same items in bulk, and 72% were

willing to pay 1¢ premium for the pre-packaged product.

In a review of frozen food packaging, **A. B. Brackett**, Birds Eye-Snyder Division, General Foods Corp., briefly traced the advances made in packaging materials during the relatively short period that frozen foods have been offered on the market. Mr. Brackett stated that developments in the packaging of frozen fruits and vegetables were further advanced than the packaging of frozen fish, meats and poultry, but that considerable progress could be expected in the latter category.

Stating his belief that the ultimate package for frozen foods has yet to be developed, Mr. Brackett called for more orderly development of packaging methods and equipment and expressed the hope that machines and packages able to be handled at speeds of 200 per minute would be forthcoming. According to Mr. Brackett, 1947 should witness some important new developments in this phase of the packaging field, but more important accomplishments may be expected during 1948.

#### TUESDAY LUNCHEONS

**Committee on Standards and Practices**, A. F. Wendler, E. I. du Pont de Nemours & Co., Inc. served as acting chairman of the committee meeting in the absence of E. A. Throckmorton, Container Testing Laboratories, who was unable to attend because of illness.

Citing the need for an agency to set up certain packaging standards and practices, Mr. Wendler reminded the committee members that the question of possible restraints involved in such a program should also be carefully weighed. He introduced O. Leland Hunt, assistant director of Trade Practice Conferences, Federal Trade Commission.

Following Mr. Hunt's discussion of the legal aspects of a standardization program under the Federal Trade Commission Act, Mr. Wendler mentioned that members of the committee were not empowered to set up any program of standardization, but could merely make recommendations to company management. He stated that results of the questionnaire recently sent out on the nomenclature of films, foils and sheetings had not yet been studied or compiled. The task of compiling these data for study was referred to G. Norwood Fisher, Kraft Foods Co., who will serve as chairman of a subcommittee to be chosen by him and to consist of equal representation from package users and package suppliers. This subcommittee will perform a similar function with the survey being made on yield values.

**Advisory Council:** D. S. Hopping, Celanese Plastics Corp., on short notice acted as chairman in the absence of J. D. Malcolmson. It was learned that in reality the advisory service of the Institute had been operating for a number of months—long enough to produce and distribute the mimeographed booklet "16 Case Histories." In response to the chairman's roll call, among the 25 or more people present, only five actual committee members from a total committee membership of 20 or more were present. One of these members declared he had never received any of the inquiries sent to committee members by the Institute. The consensus was that more definite knowledge was needed by Institute

members of the *modus operandi* of this group and the meeting adjourned following approval of a motion to appoint a subcommittee to work out and publicize a program of procedure and formulate definite areas of activity and objectives.

**Technical Committee:** C. A. Southwick, Jr., chairman, distributed copies of 12 test procedures in mimeographed form for critical evaluation by the committee members before they are turned over to the Institute for distribution to the membership. The committee was asked to suggest important problems, related both to materials and to finished packages, on which test procedures should be developed. The chairman read a list of organizations with which cooperative relations should be established and asked the committee members to suggest other organizations which should be added to the list. The directors voted unanimously to request the continuance of Mr. Southwick as chairman until the new chairman is selected by the president and directors of the Institute. (The constitution prohibits standing committee chairmen from serving more than two terms.)

#### TUESDAY AFTERNOON

##### General Session

*Chairman, GEORGE A. MOHLMAN, president, Packaging Machinery Co.*

Illustrating their address with a series of slides, **Homer E. Malmstrom** and **James T. Gresham**, technical department, Kimberly-Clark Corp., reviewed recent research work performed by this company on the subject of cushion materials characteristics. The tool used in this research is a special type of high-speed camera installation to study the effect on the inner cushioning material of repeated dropping of the container.

The authors of the paper emphasized the fact that a package should be provided with inner cushioning sufficient to protect the contents not only against a single drop, but against repeated drops which are likely to occur under actual conditions. The physical change undergone by the cushioning material as a result of the repeated blows results in a progressive reduction of its protective properties.

**Dr. Spencer A. Larsen**, Air Cargo Research, Wayne University, reviewed recent progress in the air shipment of a wide range of products, with special reference to packaging. He emphasized the need for package improvement and proposed that the present individual efforts of the airlines be discarded in favor of a cooperative program which would include the active participation of such a group as the Packaging Institute to eliminate duplication of manpower and research facilities.

Dr. Larsen recommended that specific problems relating to the packaging of products for air shipment be located by canvassing the cargo departments of the airlines and interviewing shippers, and that a relative urgency list then be set up to channel research in the proper direction.

**R. F. Weber**, of the Manufacturing Research Department, International Harvester Co., and an active figure in the organization of the Industrial Packaging Engineers Assn., discussed problems of materials handling and product protection. This comparatively new field, Mr. Weber stated, affords one of industry's best opportunities for making economies and he cited the experience of his own company in effecting savings through increased efficiency in the handling of materials in production. His company, he said, has organized a new research unit to study these problems. The IPEAA, he also pointed out, has made strides in coordinating the efforts of packaging engineers in cooperation with vendors and suppliers.

**Lester Beall**, industrial designer, discussed "Significant Factors Affecting Package Design." Confining his remarks to the surface design of the package, rather than to its construction, which he declared was the proper field for the packaging engineer, Mr. Beall described the importance of color, form and texture in package design and emphasized the importance of proper relationship between the package design and its selling theme.

#### INDUSTRY SEMINARS

Although little time was left after the Tuesday afternoon general session, interested members quickly found their way to the small meeting rooms provided for the eight industry seminars. Many of these remained in session even after the appointed hour for the cocktail party. The groups represented:

*Tobacco and Related Products:* R. D. LINTHICUM, Brown & Williamson Tobacco Corp., chairman.

*Cosmetic and Personal Accessories:* C. M. JOHNSON, Avon Allied Products, Inc.

*Candy and Confectionery:* A. B. BRACKETT, Birds Eye-Snyder Division General Foods, chairman.

*Hardware, Appliance, etc.:* LEONARD M. YOUNG, Navy Packaging Board, chairman.

*Textiles and Apparel:* STANLEY A. MARTINUS, Pacific Mills, chairman.

*Beverages:* DR. RALPH I. CLAASSEN, Hiram Walker & Sons, Inc., chairman.

*Crackers and Baked Goods:* O. L. SCHELLER, Loose-Wiles Biscuit Co., chairman.

*Chemicals, Petroleum, etc.:* J. H. LAMBERT, Standard Oil Co. (Indiana) chairman.

Attendance at these group seminars ranged from 9 to 40. Stenotype reports were made of discussions in these groups for later distribution to interested Institute members. Comment among those attending indicated that this new feature holds great promise for future usefulness, provided sufficient time is allowed for a real exchange of information between suppliers and users, and provided the agenda for each group is carefully prepared. Criticism heard: Possibility of overlapping of interest if groups are too minutely split up and danger that principle of one line of business learning from another might be defeated.

# SAMTSIRHC YRREM

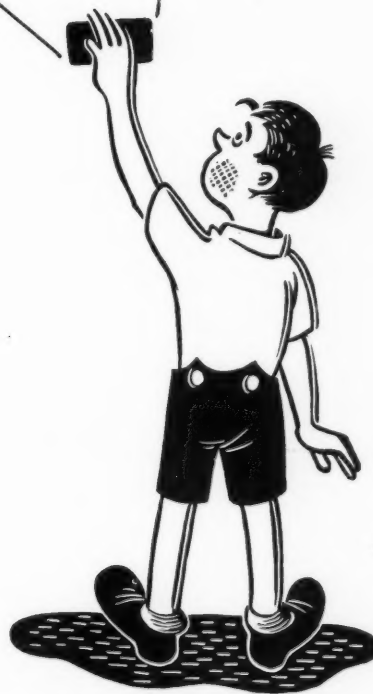


Spell it forward, spell it backward,

write it on the sky or on a postcard,

the sentiment remains the same.

Merry Christmas



**F. N. BURT COMPANY, INC.**

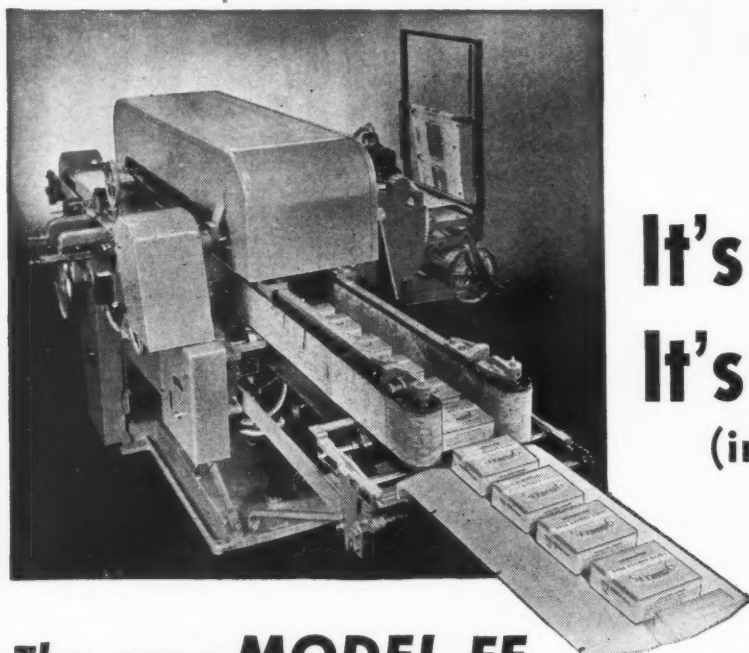
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# TECHNICAL SECTION

Charles A. Southwick Jr. • Technical Editor



PHOTO DU PONT DE NEMOURS & CO., INC

*Keen-eyed girls sort, count, inspect sheets of cellulose film. Cellophane comes in either sheets or rolls.*

## Film manufacture . . . . an outline of methods

*by William H. Aiken\**

Plastic films are applied for numerous reasons to many types of surfaces in which they are left in permanent contact. Paints and lacquers are applied to metals, woods, concrete and other substances to give weather protection and decorative effects. Plastics coatings are applied to paper to increase water-vapor resistance and to improve appearance. Plastic coatings are applied to fabric to give waterproofness and other functional characteristics as well as decorative effects.

\* Formerly Captain, U. S. Army Quartermaster Corps, in charge of research on plastic films at Brooklyn Polytechnic Institute, Brooklyn, N. Y.; now assistant manager, Plastics and Coatings Dept., Chemical Products Div., The Goodyear Tire & Rubber Co., Akron, Ohio.

In contrast to these applications where the film remains in permanent contact with the surface to which it is applied, self-supporting plastic films are utilized because of the inherent properties of the film material alone. Perhaps the most important reason for the wide-scale use of self-supporting plastic films is transparency, but many other properties such as sales appeal, toughness, chemical resistance, ease of fabrication, electrical properties, water resistance, water-vapor resistance and low density also contribute greatly to their industrial value.

Self-supporting plastic materials may be divided into

## CASTING ON DRUM

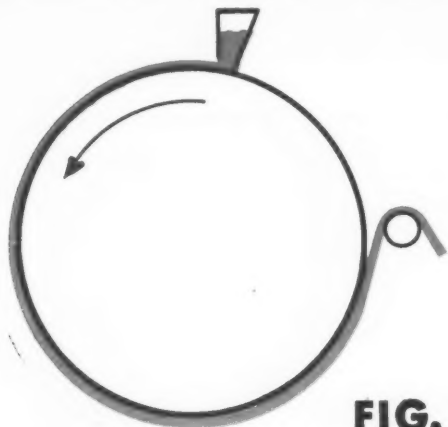


FIG. 1

## CASTING ON BELT



FIG. 2

the following two categories on the basis of thickness:

0.005 in. and below. . . . .	Film
Over 0.005 in. . . . .	Sheet

Hereafter, these definitions will be followed in this discussion.

A further division is sometimes made on the basis of rigid and non-rigid sheet. Some materials can be compounded to give either rigid or non-rigid sheet while others are useful in only one of these categories. Most of the materials used for self-supporting film and sheet are thermoplastic resin, but recently sheets have been made from thermosetting resins. Regenerated cellulose (cellophane) is not a plastic film but because of its wide usage it is included in this survey.

The principal processes for preparing films today may be divided into two categories as follows:

1. Those in which the film is formed from a solution or dispersion of the resin by coagulating or drying.
2. Those in which the resin is formed by application of heat and pressure, flow taking place due to the thermoplastic nature of the resin.

Many film-forming materials can be converted into usable films by one or several modifications of these two general processes. The processes in use today for preparing films from any given type resin are used either because they give desired characteristics such as appearance, physical properties, surface characteristics or low cost, or because the resin has certain limitations which allow it to be manufactured into a film only by certain methods.

### Film from resin solutions and dispersions

**Solution casting.** Castings of films onto polished drying surfaces is one of the methods first used for commercial preparation of plastic films. Large metal wheels as shown diagrammatically in Fig. 1, and endless belts stretched between drums as shown in Fig. 2, are both in commercial use. Nickel or chrome-plated wheels up

to 35 ft. in diameter are used. The resin solution may be applied to the wheel through a hopper, and the distance between the bottom of the hopper and the wheel constitutes an orifice which gauges the amount of solution deposited onto the revolving wheel. As the film progresses around the wheel, the temperature is increased and circulating air is used to aid in the removal of the solvent. Shortly before the wheel completes its revolution to the casting hopper, the dried or partially dried film is stripped from the wheel.

### By belt casting

The casting belt is essentially an endless belt supported by two drums. The belt may be a highly polished, plated, metal surface, or may be composed of a material such as fabric or rubber which has been given a smooth coating of some material which is not affected by the solvents to be used and from which the film may be readily stripped. The solution is cast onto the belt above one of the drums in a manner similar to that used in wheel casting. The film is dried by circulation of hot air around the belt. The film remains on the belt until it has almost completed its revolution back to the head drum, where it is stripped off. The stripped film may be returned through the length of the machine to accomplish further drying.

For economical operation, both wheel and belt casting machines are equipped with solvent recovery equipment. Rigid sheet, such as cellulose acetate, may be stripped from a belt or wheel while the film still contains a considerable amount of solvent, and further drying is accomplished either in a tunnel or festoon dryer. However, non-rigid films, such as are prepared from plasticized vinyl resins, must have most of the solvent removed from the film before stripping, or they will be too soft to handle.

Cellulose acetate, cellulose acetate butyrate, cellulose propionate, cellulose nitrate, ethyl cellulose, rubber hydrochloride, nylon, polyethylene, polyvinyl alcohol, polyvinyl chloride, vinyl chloride copolymers and poly-



styrene films can all be prepared by the solution casting method.

In Germany, film has been made on a belt-casting machine by applying a paste prepared by dispersing vinyl resins in plasticizer. This paste contains no solvent, and the resin and plasticizer are formed into a film by heating. The paste technique has the advantage that there is no limit to the thickness of the film which can be produced.

*Extrusion of a solution into a non-solvent liquid.* Films may be prepared by extruding a solution of plastic material into a liquid which is miscible with the solvent but which is a non-solvent for the plastic. For example, vinyl film may be prepared in this manner by extrusion of a solution of the resin in methyl ethyl ketone into water. In order to obtain a clear, transparent vinyl film by this process, it is necessary that all of the solvent not be removed from the resin by the precipitating liquid, but that a certain portion of the solvent be removed by subsequent drying.

The general principles may also be adapted to cellulose derivatives which may be subsequently regenerated into cellulose.

*Extrusion into acid coagulating bath.* Regenerated cellulose (cellophane) is not a plastic material, but it has by far the largest volume of any thin transparent film made in the United States today. Unlike the plastic films, which undergo no chemical change in their preparation, regenerated cellulose is manufactured by preparing an alkali solution of cellulose xanthate, and re-converting the precipitated cellulose xanthate, or viscose, to cellulose in an acid bath.

The cellulose xanthate solution is forced into the acid coagulating bath through an orifice, and is either pulled forward under its own strength or is carried on a

## HEAT EXTRUSION

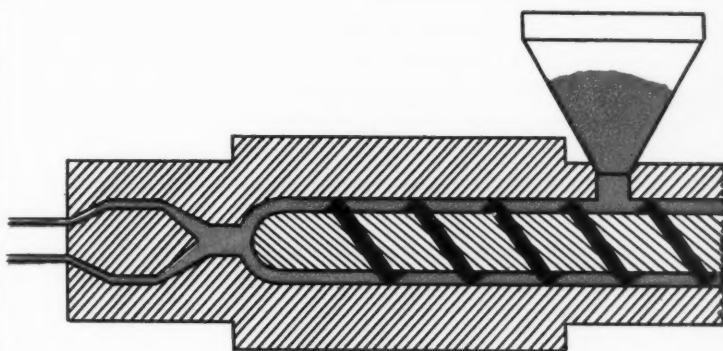
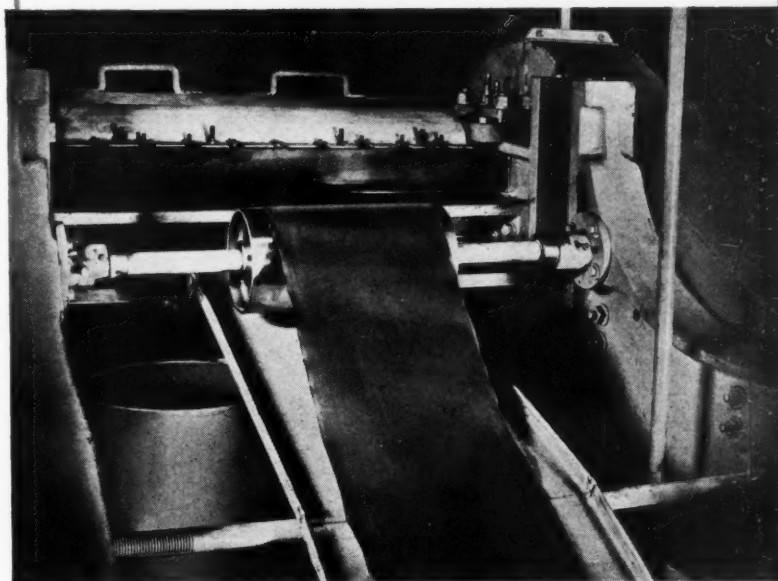


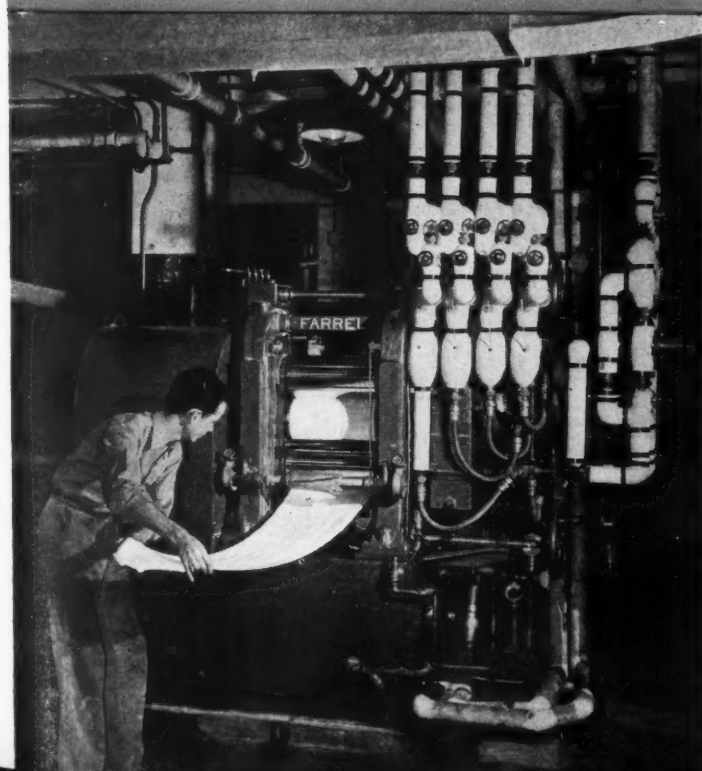
FIG. 3



PHOTO, DU PONT

PHOTO, MONSANTO CHEMICAL CO

## CALENDERING



support. The cellulose xanthate may be precipitated and then regenerated in another bath, or both precipitation and regeneration of the solution may be carried out simultaneously.

Both the flat sheets and special purpose tubes are made by this process. Special devices for escape of the gases formed have been perfected for use in regeneration of seamless tubes without rupture or weakening of the film.

*Dipping.* Some rubber items are prepared by dipping a form into latex and then into a coagulating bath. Items have also been prepared by dipping forms into a solution of vinyl resin and allowing the solvent to evaporate. The advantage of this process is that film

items with three-dimensional shapes and with no seams can be produced.

#### By application of heat and pressure

*Calendering.* In recent years large quantities of non-rigid vinyl film have been prepared by calendering. In this process the resin, plasticizer, resin stabilizer, color and calender lubricant are kneaded in a mixer and then transferred to a heated two-roll mill for further mixing. The hot mass is carried to the top of the calender stack, which consists of three or four rolls. A typical four-roll calender is shown in Fig. 4. The thickness of the film is controlled by the distance of the nip between the calender rolls. The rolls may be finished to give a smooth-

EXTRUSION INTO ACID  
COAGULATING BATH  
... the manufacture  
of cellophane

PHOTOS, DU PONT



1—Unloading a shredding machine of ground-up sheets of cotton linters and wood pulp, cellophane ingredients.



4—Rolls of cellophane are run off onto large drums. Film is then cut into specified lengths, in sheets or rolls.



5—Wide rolls often are slit into narrower widths, according to order; are weighed prior to shipment to customer.



surfaced film, or may be etched to give a mat surface. Films stripped from the calender may be cooled in air, on cooling rolls, or by submerging in a cooling liquid. If desired, the film may be oriented by the tension put on the hot film as it is pulled from the calender. For best results with resins of high vinyl chloride content, a calendering roll temperature of 340 deg. F. is necessary, but lower vinyl chloride content resins which have a lower molecular weight can be successfully calendered at lower temperature. On calenders used for high vinyl chloride content resins, bearings are hydraulically cooled to prevent their burning out by the heavy loading required in the production of thin film.

Plasticized polyvinyl chloride, plasticized and un-

plasticized vinyl chloride copolymer, polyvinyl butyral and polyethylene can be converted into film by calendering.

**Heat extrusion.** In recent years there has been increased production of thermoplastic film by heat extrusion. Films have been prepared by this method from polyvinyl chloride and copolymers, polyvinylidene chloride, polystyrene, polyethylene, cellulose acetate and cellulose acetate butyrate. In this process granules or strips of resin or compounded resin are carried forward by a screw to heated areas where the resin is softened and forced out through either a circular or slit die. The film is cooled either by contact with air or by submersion in a cooling liquid. For extrusion of poly-



2—After viscose solution is formed it goes into these aging tanks prior to reaching machines which make film.



3—Start of manufacture. A sheet is seen leaving coagulating bath on way through series of chemical treatments.



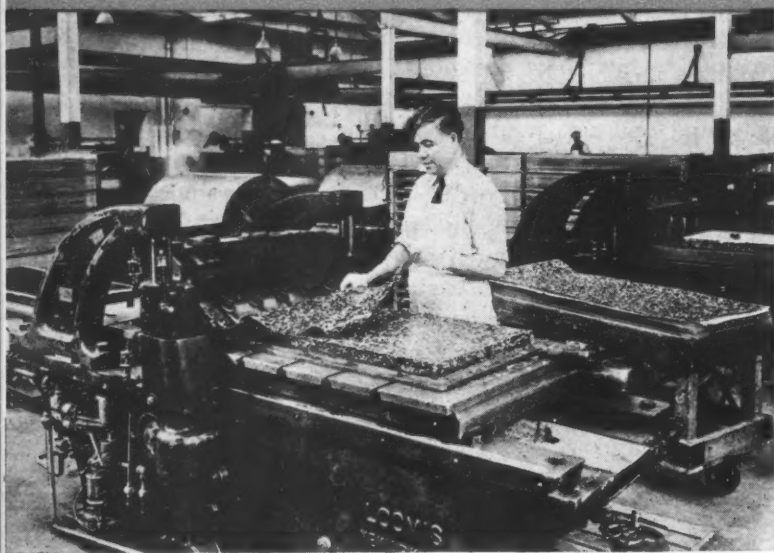
6—After weighing, each roll is inspected and careful records are kept in maker's production control department.



7—Rolls are shipped in two layers of moistureproof cellophane to protect them against moisture gain or loss.



## BLOCK SKIVING



PHOTO, MONSANTO

## POLYMERIZATION



PHOTO, DU PONT

vinyl chloride, vinyl chloride copolymers and polyvinylidene chloride, the extruder must be made from corrosion-resistant metals. The general principles of this type extruder, which can be used to make films in a wide range of thicknesses, are shown in Fig. 3.

**Wet extrusion.** This process, which has made possible the production of cellulose nitrate sheets in continuous lengths, is similar to heat extrusion with the exception that a small amount of volatile solvent is present in the extrusion mass to facilitate extrusion at temperatures that are safe for the handling of cellulose nitrate. The resin is put in a large mixer with suitable plasticizer and volatile solvent and worked into a gel-like colloidal mass. The mass is then worked on heated rolls where

dye and color pigments may be added and the solvent is allowed to evaporate until the correct consistency is reached. The material may then be rolled into a thick blanket and formed into a long cylinder known as a "jelly roll" or it may be cut into strips which are then cut into chips.

In one type of extruder known as a "stuffer," the jelly roll is stuffed into the front of the cylinder, the die clamped on and steam applied to the nozzle. When the stock has been softened, a hydraulic ram forces the material through the die. This process is somewhat slow and costly due to the time consumed in cooling the die, opening the cylinder and then reheating the die after the head has been closed. A more economical type extruder is one in which chips are fed into a continuous screw-type extruder. The sheets from either type extruder are hung in heated rooms to allow evaporation of the solvent.

**Block skiving.** For this process the stock is prepared in a manner similar to that used in wet extrusion. The stock is removed from the heated rolls and stacked in slabs. The slabs are pressed in heated presses into blocks 6 in. thick and approximately 22 in. by 52 in. The blocks are then cut into sheets 0.005 in. thick and up, and the sheets seasoned at elevated temperatures to remove residual solvent. Seasoning may be from a few days to several months. The sheets are then surface polished by pressing between heated platens. This process is used on cellulose nitrate and cellulose acetate.

**Roll skiving.** Because of its chemical inertness and heat resistance, polytetrafluoroethylene does not lend itself to fabrication into films by the conventional processes. Film has been prepared from this resin by preparing a molded cylinder from powder by application of heat and pressure, and skiving a film from this cylinder in a manner similar to that used in plywood manufacture.

### Polymerization

Methyl methacrylate sheets are prepared by pouring monomer into plate glass molds and polymerizing the material at elevated temperatures. Sheets in thickness from 0.06 in. upward have been made by this process. This method also has been recently adapted to the production of sheets from thermosetting polyester and allyl resins.

While film and sheet can be manufactured from some materials by one process only, many film-forming materials may use any one of a number of the processes. On such materials, the process used will be dictated by economics and by the properties desired. For example, calendered vinyl is seldom made *less* than 0.004 in. thick, while cast vinyl is seldom made *more* than 0.004 in. thick. Cast film must necessarily be slick, at least on one side, whereas calendered film may be made with a mat surface on both sides. The strength characteristics also will vary greatly with different methods of fabrication, even though identical compounds are used in the various processes.



## Standard Test Methods

### 6. For tensile strength and elongation

#### 1. Definitions

Tensile strength is the maximum force a material can stand without any permanent deformation.

Elongation is the deformation produced in a material when subjected to a force within the elastic limit.

#### 2. Intent and scope

The purpose of these tests is to determine the force in lbs. per linear in., required to break a strip of material and its percentage of distensibility up to that breaking point.

#### 3. Apparatus

Combination Automatic Power Yarn and Cloth Tester, Model #J-2, Machine No. G-1301 (Henry L. Scott Co., Providence, R. I.) or any similar power-driven tester of suitable capacity with suitable attachments for determining elongation graphically.

**A. Description**—This is a power-driven machine (see photo) in which the specimen is strained by a uniform movement of the pulling clamp to which one end of the specimen is attached, the other being held in a clamp connected to a weighing device based on the principle of the pendulum. The two clamp's centers are in the same plane parallel with the direction of motion of the applied stress and so aligned that they will hold the test specimen in one plane throughout the test without slippage. A Serigraph pen arm is attached to measure elongation.

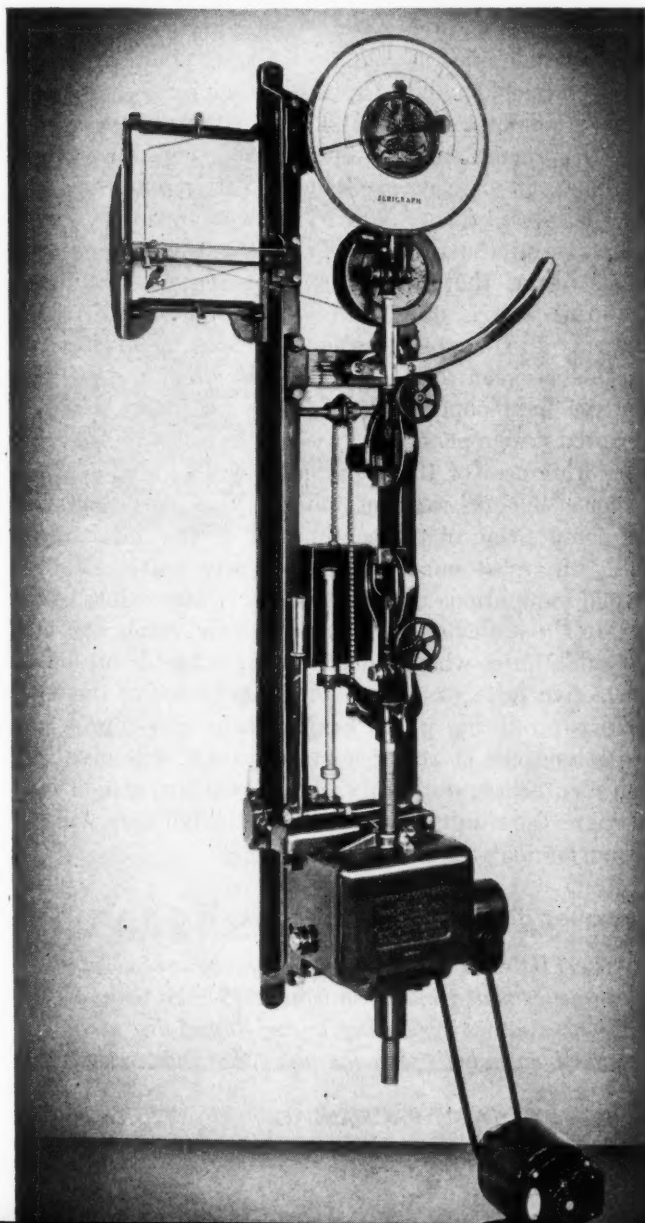
- (1) **Capacity:** The Scott tester has two tensile capacities, depending on which of the two weights are used: 0 to 50 lbs., or 0 to 200 lbs. The maximum distensibility which the machine can handle is 400%. Other testers may be employed to meet the specifications and which have facilities for varying the maximum load so that tests can be made at least 25% of full scale deflections and preferably between 50 and 100%.
- (2) **Calibration and Adjustment:** The machine is adjusted to run at 12 in. per sec., unless otherwise specified. At the start of the test the edges of the clamp jaws are two inches apart and the calibrated scale and Serigraph pen arm at zero. The tester should be calibrated once a month in the following manner:

Level the machine accurately in both the principal directions and clean the mechanism to insure that it moves freely. Apply various dead weight loads to the clamp actuating the indicat-


(Page 153)

ing mechanism and note the scale readings when the load and mechanism come gently into an equilibrium position. This can be done conveniently by wedging up the pawls holding the pendulum with a small piece of paper bent double, suspending the test weights to the upper clamp and allowing the pendulum to come to equilibrium from the direction in which it moves when the load is applied to it. The lower jaw should not be used for supporting the test weights during calibration. Make a record of deviations from the (Continued on page 170)

Automatic apparatus to test tensile strength, elongation.







# Questions and Answers

*This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.*

## Self-leveling plastic coating

**QUESTION:** *I am interested in obtaining a water white self-leveling plastic for coating on paper. The resulting surface should be highly decorative, preservative and not discolor the inks or paper in any way. The resulting appearance should be similar to that of an acetate laminated sheet. Can you suggest any coatings or techniques to accomplish this work?*

**ANSWER:** It is extremely difficult to coat paper with any known materials or processes to achieve a result which is comparable to the laminations of such clear and durable films as cellulose acetate. Laminations of transparent films have the advantage in having an optically smooth surface and create the appearance of depth because of the thickness of the films. Such laminations can also be made with complete control of the colors because in many cases the printing is done directly on the reverse side of the transparent film. This means that the laminating agent is behind the printing and is only used to secure adhesion of the paper. In this position the laminating agent does not act as a screen to discolor or stain either the printing or the base paper. In contrast, coatings applied to printed paper penetrate to some degree which affects the whiteness of the paper and also may change the color of the inks compensated for by careful adjustment of composition of the coating and of the inks. Probably the most important reason why coatings fail to equal laminations is that it is nearly impossible to develop the optically flat surface and the result is a lack of smoothness which is extremely noticeable on highly reflective surfaces. You can contact some of the companies producing paper lacquers who can supply you with samples of paper coatings which will give you excellent gloss, durability at low cost and which may achieve the results you want even though they will not equal laminations of transparent films.

## Lacquer dip for cosmetic closures

**QUESTION:** *I am working on a problem of closures for a cosmetics house and am interested to learn the names of some companies producing a cold liquid-dip resin lacquer. I intend dipping the glass top and neck of per-*

*fume bottles in this liquid-dip product, thus producing a transparent, protective plastic coating and would appreciate your views on this idea.*

**ANSWER:** Your search for a supplier of a material for dipping perfume bottles could be greatly simplified by going through the Suppliers' Directory in the back of *Modern Packaging Encyclopedia*, formerly *Packaging Catalog*.

If you will look in this Directory and write to various companies listed under *Material and Supplies Section* under the sub-heading of "Coatings, Protective, Removable," you will find several who manufacture a product of the type you desire.

It would seem that this idea of yours is entirely practical and would be successful if you had proper control of the viscosity of your lacquer solution and some means for drying the solvent from the applied film.

## Flexible container for syrupy product

**QUESTION:** *We have a syrupy liquid which is used in household cooking. The product occupies about 18 cubic centimeters and we are interested in a flexible heat sealing package which will protect the product and allow us to make a decorative, flexible package which is convenient to the housewife. We previously have been packaging our product in glass jars with a screw cap.*

**ANSWER:** At the moment, there doesn't appear to be any material or automatic packaging equipment which will handle your liquid product in a flexible plastic package. Unquestionably, in the future, there will be flexible and heat-sealing transparent plastic materials which will be sufficiently moistureproof, chemically inert and taste free and which can be filled and sealed on automatic equipment for a low-cost one shot package to carry a liquid similar to your product. However, today there is no material or a machine set up which will handle your product in anything but a glass jar. The only other possibility would be for you to dehydrate your product in some way to make a free-flowing powder, since with this change of state there are many envelopes or unit packages which you can use successfully and economically.



# YOU NEED PROTEK-SORB\* silica gel IF...

Your product is to reach the consumer "factory-right", free from moisture damage and ready for immediate use... whether you are packaging surgical instruments or printing presses.

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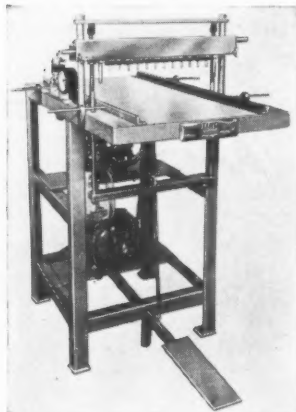
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DECEMBER • 1946

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# Equipment and Materials

## FILLING MACHINE FOR SMALL CONTAINERS



The MRM Co., New York, N. Y., announces that deliveries are being made on their rapid filling machine for small-sized containers. This tray-type filler handles fractional-ounce to two-ounce containers at a speed of 100 to 160 per min., the company states, and may be used for such commodities as perfume, nail polish, toiletries and drug sample bottles. The machine, known as the "Tru-Fill," has 12 drip-less spouts, height-adjustable spout bar, stainless steel contact parts and welded steel

construction. Both the lowering of the filling head, by means of the foot treadle and hand feeding of the trays, is easily handled by a single operator. The machine fills directly from any floor-level reservoir.

## ADHESIVE FOR CORRUGATED CARTONS

A new adhesive for sealing corrugated cartons which has been developed by the United States Rubber Co., is said to speed up packaging operations and lower production costs. The new cement, it is claimed, produces a permanent bond resistant to extremely high and low temperatures. The product, known as U. S. Royal Adhesive M6165, has a synthetic rubber base, and may be applied with a spray gun. Inasmuch as only a small quantity is required for each carton, it is said to effect considerable savings.

## PORTABLE BAG CLOSER AVAILABLE

The Richardson Scale Co., Clifton, N. J., announces that its bag closer production lines, which were discontinued because of material shortages during the war, have been reestablished. Their aluminum portable, bag closer, is now distributed exclusively through the Bemis Bro. Bag Co., St. Louis, Mo. No motor or electric power is necessary to operate the closer—it functions on a friction drive. As the closer is drawn across the bag, friction rollers rotate on double-row, felt-sealed ball bearings which require no lubrication, and transmit power to the needle through a train of gears operating on oil-less bearings. A tag, card or ticket may be sewn on the bag in one operation. When this is desired, the ticket is placed in the slot provided and it automatically feeds through and is stitched neatly in place. The closer case is sturdy, yet weighs only eight pounds, and is made as an aluminum die casting with a highly polished finish which prevents the collection of dust.

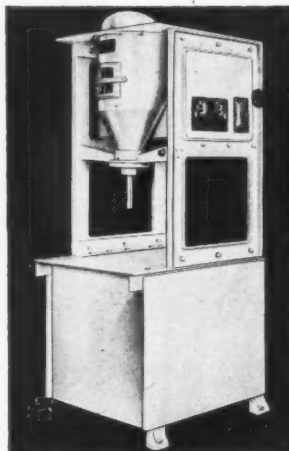


## INCLINED BELT WITH HORIZONTAL FEED

Standard Conveyor Co., North St. Paul, Minn., announces its new Inclinebelt Conveyor which may be used for elevating and lowering shipping containers in limited space. Set permanently at 28 degs., it provides an "off the shelf" conveyor for this com-

mon handling problem. Two belt widths are available—14 in. and 24 in.—and both widths are made in lengths for floor to floor elevations of 8 ft. to 14 ft. 6 in., inclusive. Machines are furnished with or without the horizontal feed section at the bottom. The top end is curved like a gooseneck to provide horizontal feed or discharge of commodities.

## AUGER FILLER



George G. Rodgers Co., Inc., New York, N. Y., announces its new auger-type filler which will handle pulverized, granular, crystalline or paste materials in a range from  $\frac{1}{8}$  oz. to 10 lbs., filling all types of rigid or flexible containers. A simple dial adjustment controls package fill time and permits accurate changes for any type of material. Package transfer time can easily be set by a dial to accommodate the speed of the operator. Both the settings for transfer time and filling speed are completely independent of each other. Noteworthy features of the machine

are: elimination of cams; all mechanisms placed above the auger and tube so that no clogging of bearings while filling is possible; and operating safety, assured by emergency shut-off switch and complete housing of moving parts. The machine has a minimum of mechanical linkage, the company states, and no tools are necessary to regulate the variables for a changeover. The filler is 79 in. in height and occupies a floor space of 29 in. by 36 in.

## METAL FOIL PRESSURE-SENSITIVE TAPE

Industrial Tape Corp., New Brunswick, N. J., announces a new metal foil fibre tape, known as Permacel 12, which is a lamination of dead soft aluminum foil and rope paper. This pressure sensitive tape, applied without moistening, is available in widths from  $\frac{1}{2}$  in. to 2 in. Other widths up to 36 in. are available on special order. The tape does not have a sharp edge which makes it easy to handle, the makers claim, and the adhesive is a very tacky layer with excellent shelf life. Many uses are indicated, both for decorative purposes as well as for such utilitarian applications as the sealing of metal foil packages of photographic film, foods, hygroscopic chemicals and the like.

## AUTOMATIC BAG OPENER

Originally designed for handling chocolate-coated ice cream bars with minimum effort at maximum speed, the bag opener made by Anderson Bros. Mfg. Co., Rockford, Ill., is finding wide usage in other fields such as confectionery and hardware. Simple adjustments for height and tilting of the machine enable a single operator to receive the opened bag, fill it and place it in a carton in one continuous operation. The stainless steel bag-trough has a capacity of approximately 200 (Continued on page 166)







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# Plants and People



Lee Hickox

the Container Corp. of America.

**Selectronic Dispersions, Inc.**, Montclair, N. J., has announced the election of **William C. Appleton** as president and director of the firm. **Raymond M. Tierney**, former president, has resigned that position and has been elected secretary-treasurer, succeeding **Reuben Kittenplan**, who will remain active in the company's affairs. Mr. Appleton recently resigned as president and director of the **American Viscose Corp.**, to assume his new post with **Selectronic Dispersions**.

**Ira L. Henry Co.**, Watertown, Wis., has announced the completion of its new plant, erected on the site of its old building which was completely destroyed by fire last year. The company has now resumed the production of paper set-up boxes.

**Guy B. Wheeler, Jr.**, has been appointed manager of the Decorative Papers Department of the **Aldine Paper Co.**, New York.

**Edwin L. Hobson** has been appointed assistant branch manager of the New York office of **Monsanto Chemical Co.**'s plastics division. Mr. Hobson, a lieutenant colonel during the war, supervised a large staff engaged in research, design and development of plastics for the Office of the Quartermaster General.

A formal sales training program has been initiated by the **American Can Co.**, New York, N. Y., to implement the firm's policy of promoting employees from within the ranks. As vacancies occur, recruits will be drawn from among the trainees.

**John A. Buckley** has been appointed merchandise sales manager of the **General Electric Co.**'s Chemical Department. Mr. Buckley, who has been with General Electric since 1935, will make his headquarters at Pittsfield, Mass.

**Robert Gair Co., Inc.**, New York, N. Y., has announced the resignation of **Arthur J. Bauser** as assistant treasurer and his election as assistant comptroller. **C. Richard Bradley** succeeds Mr. Bauser as assistant treasurer.

**Stanley W. Burnham**, formerly manager of the Container Department of **Merck & Co., Inc.**, is now packaging engineer with **William R. Warner & Co.**, New York, N. Y. He will coordinate packaging activities for that company's subsidiaries.

"How to Get Ideas" was the subject of a recent talk by **Thomas D'Addario**, New York industrial designer, before members of the School Art League at the Metropolitan Museum of Art.

**Charles J. Hennick**, cashier for the Baltimore office of **National Can Corp.**, was recently given an ovation by his fellow workers on his 80th birthday. He has been with the firm 40 years.

**George B. Underwood** has been named assistant to the president of the **Knox Glass Associates, Inc.**, Knox, Pa., according to **R. R. Underwood**, president of the Knox group.

**Bemis Bro. Bag Co.**, St. Louis, Mo., has appointed **T. A. Buck** as sales manager of its Kansas City office.

**Standard Cap & Seal Corp.**, New York, N. Y., has announced the appointment of **Lee Hickox** as general sales manager, with headquarters in Chicago. Mr. Hickox is widely experienced in the food packaging field, and joined Standard Cap & Seal last year to develop flexible vacuum packaging. During the war, Mr. Hickox served in the packaging section of the Office of the Quartermaster General in Washington. Prior to that time he was associated with

Announcement has been made of the transfer of ownership of **Joliet Chemicals, Ltd.**, Joliet, Ill., and the formation of a new corporation known as **Joliet Chemicals, Inc.** **Kenneth F. Nash**, managing partner of the old organization, is president of the new firm, and **L. T. Hartlove**, formerly with **Davison Chemical Co.**, is vice-president in charge of production.

**Diamond Straw & Machine Co.**, manufacturer of spiral wound paper tubes and containers, New York, N. Y., announces its removal to a recently acquired building at 32-36 W. 18th St.

**Henry W. Clowe**, formerly in the Office of the Quartermaster General in Washington working on the development of plastic films and previously with the **Sylvania Industrial Corp.**, announces the opening, in Jackson, Miss., of **H. W. Clowe & Co.**, a manufacturers' agency for packaging materials and equipment, covering the Mid-South.

**Champlain Co., Inc.**, manufacturers of rotogravure and rotary letterpress equipment, has opened offices in Chicago at 7 S. Dearborn St. **E. T. Coopat**, formerly Eastern sales representative for the firm, will be in charge.



J. F. Ferguson

**General Box Co.**, Chicago, Ill., has announced the election of **J. F. Ferguson** and **William C. Embry** as vice-presidents of the firm. Mr. Ferguson will manage sales, and Mr. Embry will continue as general manager of the company's Louisville, Ky., plant. Announcement has also been made of the transfer of the firm's general purchasing headquarters to the Chicago office, 500 N. Dearborn St.

**C. W. Nelson**, chief engineer of **Kimberly-Clark Corp.**, Nee-nah, Wis., will be general manager of the firm's expansion program. **A. G. Wakeman** will be his assistant, and **J. T. Whelan** will be acting chief engineer.

**Carl F. Sprague** has been appointed manager of the **Sandusky, Ohio**, package laboratory of **The Hinde & Dauch Paper Co.** Mr. Sprague formerly was with the **General Electric Co.**'s package design division and with the merchandise preparation department of **Spiegel, Inc.**

A Pacific Coast district office of the **Armstrong Cork Co.**'s **Glass and Closure Division** was established at San Francisco on Dec. 1. The new office will handle drug sundries sales only. **K. B. Smith**, associated with the company as salesman in that area for several years, has been made Pacific Coast manager.

Other sales organization changes announced by the **Armstrong Glass and Closure Division** include **H. A. Davis**, successor to **Ted Schomeyer** in the Detroit office; **W. H. Nenstiel**, successor to **Gordon Sanders** as salesman in the Los Angeles area.

**Stanley Sapery**, manufacturers' representative for closures, plastic boxes, etc., has announced a change of address to 341 Madison Ave., New York, N. Y.

**The Dayton Folding Box Co.** has announced the opening of its new offices and factory at **Harrison, Ohio**.

**William H. Denney**, sales manager of **Anigraphic Process, Inc.**, New York, N. Y., died in Baltimore, Md., recently after an illness of several months. Mr. Denney was 72 years of age.

**A. C. Carpenter**, director and first vice-president of the **Bemis Bro. Bag Co.**, St. Louis, died Nov. 5 at the age of 77.

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# For Your Information

The National Paper Box Mfrs. Assn. has announced the election of C. Knowlton Shaw, Jr., of Shaw Paper Box Co., Pawtucket, R. I., as vice-president of the association to fill the vacancy caused by the death of William J. McClintock, Jr., of The McClintock Corp., Harrisburg, Pa.

The 38th annual meeting of the Grocery Mfrs. of America, Inc., was held last month at the Waldorf-Astoria, New York, N. Y. Sessions were devoted to discussions of management-employee relations, public relations, marketing and distribution, and the world food situation.

A 30th anniversary dinner, signaling the founding of the organization in 1916, was one of the features of the annual business meeting of the Label Mfrs. National Assn., held on Nov. 6, 7 and 8 at the Edgewater Beach Hotel, Chicago, Ill. Joseph P. Thomas, president, U. S. Printing & Lithograph Co., Cincinnati, Ohio, was re-elected president of the association, while Charles R. Cosby was continued in the post of executive secretary. Other officers named include Ted Fleming, Fleming-Potter Co., Peoria, Ill., vice-president, and Henry Doeller, Jr., Simpson & Doeller Co., Baltimore, Md., treasurer. New directors chosen to fill expiring terms were Joseph M. Davidson, Piedmont Label Co., Bedford, Va.; Ted Fleming; George W. Hall, Western Lithograph Co., Los Angeles, Calif., and Alfred Weinsheimer, Magill-Weinsheimer Co., Chicago, Ill.

Protective Coatings Corp., 689-91 Main St., Belleville 9, N. J., announces the publication of a brochure detailing the physical characteristics and applications of its two types of bags and case liners—Aqua-stop, a "breathing" material, and M-V-Bar, a nonbreathing material—and also two new materials: Antaqua, a synthetic coated paper for special purposes, and Plasti-peel, a hot-dip plastic coating composition.

Among the packaging suppliers represented with exhibits at the Fourth All-Industry Refrigeration & Air Conditioning Exposition held recently in Cleveland were the Armstrong Cork Co., Container Corp. of America, Cushman & Dennison Mfg. Co., Davison Chemical Corp., E. I. du Pont de Nemours & Co., Inc., Goodyear Tire & Rubber Co., Joliet Chemicals, Ltd., Jiffy Mfg. Co., Kalamazoo Vegetable Parchment Co., Lily-Tulip Cup Corp., Marathon Corp., Minerva Wax Paper Co., Shellmar Products Corp., E. W. Twitchell, Inc., and Western Products, Inc.

Increase in the flow of top quality waste paper to the consuming mills through dealer education and dealer-mill relations will be emphasized in the long-range program to be carried out by the public relations committee of the Midwest Consumers of Waste Paper, St. Louis, Mo. The program was planned at a meeting of Midwest consuming mill executives recently held in St. Louis.

The Chicago Professional Paper Group was recently presented with a charter and banner by K. P. Gohegan, national executive committeeman of TAPPI, in recognition of the group's formal affiliation with TAPPI as a local section.

"Modern Art in Advertising" is the title of a handsomely bound catalogue containing reproductions of full-page advertisements executed for Container Corp. of America, 111 West Washington St., Chicago, Ill. Published by Paul Theobald of Chicago, the book retails at \$7.50 per copy.

G. C. Wilson & Co., makers of electronic controls, have issued a printed memorandum on their servomechanisms, devices for synchronizing two or more production movements or operations. Copies of the memorandum are available on request to the company at 2 N. Passaic Ave., Chatham, N. J.

## What's doing

Jan. 12-18—National Food Brokers Assn., 42nd annual convention, Atlantic City, N. J.

Jan. 14-17—First National Materials Handling Exposition, Public Auditorium, Cleveland, Ohio.

Jan. 19-24—National Cannery Assn., 40th annual convention, Atlantic City, N. J.

Jan. 20-24—Canning Machinery & Supplies Assn., annual meeting and exhibit, Atlantic City, N. J.

A research program undertaken four years ago by the National Cannery Assn. in collaboration with the Can Mfrs. Institute has resulted in what is claimed to be the first measurement of the nutritional value of ready-cooked foods. Heretofore nutritional statistics have been expressed only for raw, uncooked foods. Results have been published in a booklet entitled "On-The-Table Values in Canned Foods," copies of which may be obtained from the Institute, 60 E. 42nd St., New York 17, N. Y.

A catalog of seasonal and occasional packaging bands and wrappers is being distributed by Shellmar Products Corp., Mt. Vernon, Ohio. More than 25 actual samples of decorated cellophane materials are contained in the catalog, copies of which are available on request to the Shellmar company.

The Assn. of American Railroads Freight Loading and Container Section is now distributing its second progress report on the use of glue in loading fibreboard containers in closed cars. The report, issued under General Information Series No. 506, dated Oct. 1, 1946, is entitled "Progress Report on Glued Unit Loading System." Single copies are available without cost on request to the secretary of the Association's Freight Loading and Container Section, 59 E. Van Buren St., Chicago 5, Ill.; a charge is made for quantity lots.

The Packaging Institute, Inc., 342 Madison Ave., New York, N. Y., has announced the publication of "Sixteen Case Studies," based on the 1946 activities of the Institute's Advisory Council, services of which are available to members and non-members alike.

The qualities and uses of waxed paper are featured in a colorful broadside being distributed by the Waxed Paper Institute, Inc., 38 S. Dearborn St., Chicago 5, Ill. Part of an extensive direct-mail campaign, this promotional piece has as its title, "Waxed Paper, the Pack-Horse of Packaging."

Increased emphasis on self service of pre-packaged food products was foreshadowed in a number of commercial exhibits at the 9th annual convention of the Super Market Institute, held at the Stevens Hotel, Chicago, Nov. 3-7. Predictions of eventual 100% self-service operation in some markets were voiced by industry spokesmen. Pre-packaged meat cuts, fruits and vegetables were among the foods displayed in open refrigerated cases.

A glossary of technical words, terms and phrases used in the plastics and rubber industries has been published by B. F. Goodrich Chemical Co. Requests for copies should be addressed to the company at 324 Rose Bldg., Cleveland 15, Ohio.

An illustrated booklet entitled "Acme Steel Strapping for Bracing Car Doorways" offers in- (Continued on page 166)



# Bringing more sun to shut-ins...



**H**ARD to believe that the young nurse is adjusting a window glazed with a *packaging material*, isn't it?

Yet that's just what she's doing . . . Double layers of Kodapak II, thin-gauge, acetate butyrate sheeting, laminated with coarse-mesh cotton scrim, produce a lightweight, long-lasting, weather-resistant type of material that transmits a wide range of the sun's health-giving ultraviolet rays.

Result: a glazing specially adapted for use in hospitals, in homes and offices, and on farms.

Choice of Kodapak II for this purpose is proof again of this product's great versatility . . . of the wide range and variety of its uses.

Although the current supply of Kodapak and Eastman Acetate Sheet is not sufficient to meet the steadily increasing demand, the Kodak Transparent Packaging Laboratory in Rochester is available to demonstrate fabricating methods.

**Cellulose Products Division  
Eastman Kodak Company, Rochester 4, N. Y.**

**KODAPAK AND EASTMAN ACETATE SHEET**

**Attract . . . Protect . . . Sell**

**Kodak**

# U. S. patent digest

edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

**Pocket Dispenser**, W. C. Moeller, Kansas City, Mo. U. S. 2,408,150, Sept. 24. A pocket dispenser for small articles comprising a pair of mating, disc-shaped sections; means for pivotally interconnecting the sections at their axes for relative rotary movement, and a series of stalls between the sections and in a path substantially concentric with the pivotal connection. A pocket is formed by one of the sections at the axis thereof, and a discharge port in said one section in communication with the pocket.

**Packing Wrapper**, G. W. Boh (to O. B. Andrews Co., Chattanooga, Tenn.) U. S. 2,408,159, Sept. 24. A package of yarn cones comprising a sheet of fibrous material folded to form a rectangular frame having top and bottom walls inclosing the cones, the ends of said sheet being secured in overlapping relation to form a double layer top wall, said top and bottom walls having aligned openings therein.

**Blade Package**, J. Muros (to Gillette Safety Razor Co., Boston, Mass.) U. S. 2,408,222, Sept. 24. An open container for use in forming a blade package, comprising a straight elongated blank of pasteboard having therein a pair of substantially identical rectangular recesses spaced apart and connected through a common trough of less width than the recesses and intersected by a transverse scored line, when folded on said score line it may be sealed.

**Valve Bag Filling, Weighing, and Discharging Apparatus**, W. R. Peterson (to St. Regis Paper Co., New York, N. Y.) U. S. 2,408,225, Sept. 24. In an apparatus for filling and discharging receptacles, means for feeding material to a receptacle, a one-revolution clutch, manual means for closing the clutch, means responsive to the operation of said clutch, for initiating the feed of material to the receptacle, adjustable means for opening the clutch during the course of its one revolution, weighing means, and means responsive to the action of said weighing means for stopping the feed of material.

**Bottle Carrier**, L. H. Cohn, University City, Mo. U. S. 2,408,249, Sept. 24. A device for carrying bottles comprising a pair of flat rigid members disposed in side-by-side relation, said members having complementary rows of recesses formed in their opposed side margins.

**Bottle Dispensing Apparatus**, L. D. Dennis (to Portable Elevator Mfg. Co., Bloomington, Ill.) U. S. 2,408,380, Oct. 1. In a bottle dispensing apparatus, a bottle compartment comprising a plurality of tiers of bottle dispensing chutes arranged one above the other, successive tiers being oppositely inclined, each tier including a plurality of parallel chutes.

**Apparatus for Sealing Containers**, H. A. Rau (to Crown Cork & Seal Co., Inc., Baltimore, Md.) U. S. 2,408,447, Oct. 1. In a container-capping apparatus, a base, a straight-line steam tunnel mounted on said base, said tunnel including a top wall and two side walls to define an inlet and an outlet at the respective

opposite ends, conveyor means carried by said base to move containers through the tunnel, the top wall of the tunnel being positioned to lie closely adjacent the mouths of the containers, and means carried by and below the tunnel top wall to apply and seal caps upon containers.

**Bottle Stopper and Pouring Spout**, H. B. Wright, Nashville, Tenn. U. S. 2,408,463, Oct. 1. A bottle having a neck, with a cylinder mounted on the interior of the bottle and co-acting with the neck, said cylinder having inlet slots, a rod slidable in said cylinder, and a stopper on the outer end of said rod, said stopper being engageable with and movable toward and from the discharge mouth of said neck.

**Holder for Containers**, A. Dawson, Tarentum, Pa. U. S. 2,408,611, Oct. 1. A reverse folding, two-size, completely confining holder for containers comprising a square base formed of one piece of wire with extremities extended within the square and two opposite sides serving as axes for standards, and so adapted as to confine bottles of various sizes.

**Packaging**, E. E. Eldredge (to Kraft Foods Co., a corporation of Delaware). U. S. 2,408,616, Oct. 1. A shipping package comprising a plurality of relatively independent, substantially alike package units assembled in side by side, co-planar alignment, each of said units comprising a filled fibreboard box having a bottom, sides, ends and an open top, the open tops of the boxes being disposed in the same plane, and a fibreboard member having a main panel disposed across the open tops.

**Bottle Closure to Render Bottles Non-Refillable**, H. W. Hagen, Decatur, Ill. U. S. 2,408,634, Oct. 1. A bottle closure comprising a hollow body portion provided at its lower end with a plurality of valve-sealable openings, a core member positioned interiorly within said body portion and spaced therefrom so as to provide a path for fluids, said core portion being provided at its lower end with a plurality of recesses adapted to guide freely movable valve members capable of obturating said openings, but limited as to their movement.

**Container or Shipping Case Having a Removable Cover to Be Locked and Sealed**, J. Burger, New York, N. Y. U. S. 2,408,731, Oct. 8. A shipping case comprising a bottom, end walls, side walls and a removable closure therefor, said side walls having grooves therein, locking members pivotally secured to the closure, stop members fixed to the closure and extending at substantially right angles to the grooves upon arranging the closure in the case.

**Container for Pencil Leads and the Like**, G. L. Beckstrom (to Autopoint Co., Chicago, Ill.) U. S. 2,408,902, Oct. 8. A container for leads for mechanical pencils, comprising a pair of hollow telescoping members each closed at one end, and having longitudinally extending slot at open end.

**Paperboard Coin Box**, C. F. Klein (to Frankenberg Bros., Inc., Columbus, Ohio). U. S. 2,409,047, Oct. 8. A normally closed coin-receiving box comprising a paperboard body composed of a single blank of material which is cut and folded to provide side, front and back panels and a plurality of re-enforcing panels engageable with the inner surfaces of the front and back panels, and with end-forming clamps formed with certain of said panels, and having additional coin retaining flaps.

**End Labeling Mechanism**, E. E. Pohl (to American Machine & Foundry Co., a corporation of New Jersey). U. S. 2,409,065, Oct. 8. In a web-cutting mechanism the combination with a stationary support, of a stationary knife provided with a cutting edge and a knife supporting member pivotally mounted on said arm.

**Bag Storage and Process of Manufacture**, C. V. Brady & R. J. Williams (to Bemis Bro. Bag Co., St. Louis, Mo.) U. S. 2,409,100, Oct. 8. A method of manufacturing bags comprising applying to a continuous web portion of material laterally located and longitudinally spaced bars of adhesive, applying longitudinal stripes joining the ends of said bars of adhesive and located near the edges of said web, and applying a continuous tape over one of said stripes to cover the same.

**Printing Ink**, E. D. Lee (to Interchemical Corp., New York, N. Y.) U. S. 2,409,215, Oct. 15. A heat-drying printing ink comprising pigment dispersed in a vehicle which comprises a solution of coal resin free from coal in a petroleum-hydrocarbon solvent which is substantially non-volatile at 20 deg. C., and volatilizes readily when heated to temperatures of the order of 150 deg. C.

**Adhesive Tape Dispenser**, M. E. Lessin (to Minnesota Mining & Mfg. Co.) U. S. 2,409,217, Oct. 15. An adhesive tape dispenser comprising a spool for holding a supply roll of tape, a hollow cylinder into which the spool fits concentrically, bearing means for pivotally mounting the spool for rotation within the cylinder about an axis that is coincident with a common diameter of the spool and the cylinder, and equipped with severing edge.

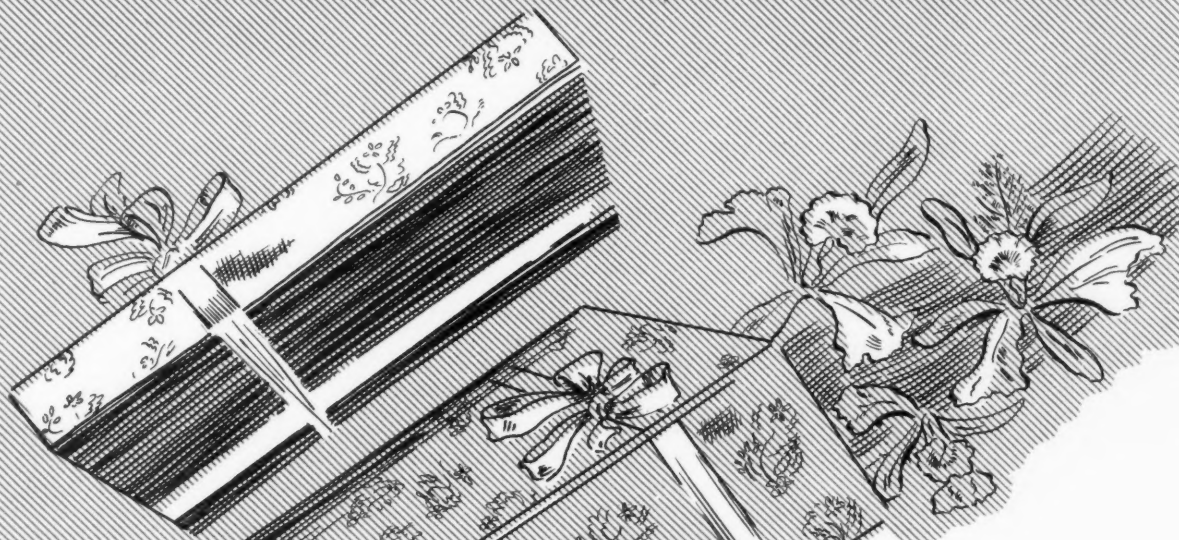
**Asphalt Adhesive**, L. Davis & A. J. Gauthier (to McLaurin-Jones Co., Brookfield, Mass.) U. S. 2,409,258, Oct. 15. An adhesive consisting essentially of the following constituents: Asphalt emulsion—20 and Burgundy pitch—3=6.

**Intaglio Ink**, E. D. Lee (to Intrachemical Corp., New York, N. Y.) U. S. 2,409,214, Oct. 15. An intaglio printing ink comprising coloring matter dispersed in a vehicle which comprises a solution of Utah-type coal resin in an aliphatic hydrocarbon solvent having a volatility in the range between that of benzene and that of toluene.

**Bag with Insoluble Automatic Fold Closing**, A. Rambold, Dresden, Germany (vested in the Alien Property Custodian). U. S. 2,409,314, Oct. 15. An open bag of polygonal cross section formed from a rectangular blank of paper-like material having a smooth continuous bottom and at least two smooth continuous sides with side edges folded over and over and folded projecting tabs are formed, the bag being turned inside out to dispose the said folds and the tabs on the inside of the bag whereby the folds and tabs are prevented from unfolding.

**Centrifugal Extractor**, E. M. Borg, Seattle, Wash. U. S. 2,409,341, Oct. 15.





## *Breath-taking beauty... Exquisite design*

In her inimitable fashion, Nature has endowed the orchid with breath-taking beauty and perfection. So, too, Marvellum has created a new line of "Papers Distinctive" with exquisite designs and materials that cannot be matched.

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The new "Papers Distinctive" are now in production. Be sure to see the new samples before you plan your next package design. Sample books are now available.

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HOLYOKE  
MASSACHUSETTS



In a machine for centrifugal extraction of liquid content from a product, a conveyor, means for moving the conveyor along a path of travel, and an endless belt having a part thereof operating parallel with said path and in a direction opposite the travel of the carrier.

**Package**, M. Kleinmann (to American Safety Razor Corp., Brooklyn, N. Y.). U. S. 2,409,362, Oct. 15. A package adapted to be opened and closed for use with a substantially thin flat article, said package comprising a base panel member, a second panel member hingedly attached along one side to said base member and movable to and from a position overlying said base member.

**Blade Magazine**, N. Testi (to Gillette Safety Razor Co., Boston, Mass.). U. S. 2,409,401, Oct. 15. A blade magazine having walls forming an elongated enclosure, a stack of slotted open-end blades within the enclosure, the slots having a local enlargement therein, a rib in the enclosure engaged at opposite ends with one end only of alternate blades of the stack.

**Manufacture of Containers**, H. F. Waters, New York, N. Y. U. S. 2,409,460, Oct. 15. A process for securing a closure to a container provided on its interior surface with a thermoplastic liquidproof material which comprises coating the closure with a thermoplastic liquidproof material, bringing into juxtaposition only coated surfaces of the closure and container.

**Method of Closing Bag Tube Ends**, W. J. Geimer & R. R. Linda (to Bemis Bro. Bag Co., Minneapolis, Minn.). U. S. 2,409,621, Oct. 22. The method of closing and sealing the open top of a bag of the intucked type, which consists in securing anchor elements to certain wall portions at the sides of the bag top.

**Bag Opening and Filling Apparatus**, M. J. Harrington, Cleveland, Ohio, S. E. Hammer, Eagleville, Pa. U. S. 2,409,626, Oct. 22. In an apparatus of this type, a pair of adjacent substantially co-extending generally flat members adapted to be inserted into a bag by relative telescopic movement between said members and bag, and means for spreading the walls of said bag to open same to make ready for filling.

**Can Making Machine**, L. L. Jones (to American Can Co., New York, N. Y.). U. S. 2,409,631, Oct. 22. In a can-making machine, the combination of a plurality of spaced inclined vanes for receiving can part blanks, and longitudinally reciprocating feeding devices continuously operative adjacent vanes for successively advancing the received blanks from the lower portion.

**Paper Bottles and the Like and Method of Manufacture**, J. E. Annen (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,409,655, Oct. 22. The method of making milk bottles and like containers of fibrous material adapted to receive a closure disk comprising the steps of forming a tubular conical wall of fibrous material with an out-turned flange on the upper edge thereof.

**Cosmetic Container**, C. R. Book (to The Eyelet Specialty Co., Waterbury, Conn.). U. S. 2,409,658, Oct. 22. A cosmetic container comprising an inner sleeve provided with a propelling slot, an outer sleeve having a spiral guide slot, a cosmetic-holding cup within the inner sleeve and having a projection entering both of the slots.

**Fibreboard Container Having Reinforced Ends and Integral Hinged Closure**, (To Downing Box Co., Milwaukee, Wis.). U. S. 2,409,673, Oct. 22. In a container having a bottom provided with end flaps and having side walls provided with end flaps, end walls for the container, each end wall comprising inner and outer layers between which the end flaps of the bottom and side walls of the container are received.

**Bottle Carrier**, T. H. Jenkins, Chicago, Ill. U. S. 2,409,684, Oct. 22. A carrying device for a bottle having a neck provided with a collar, comprising a U-shaped member of resilient metal and a bar hinged at one end to one arm of the U so as to be capable of swinging from a vertical position down over the second arm.

**Container**, C. E. Nyberg (to James F. Barnes, as trustee), Chicago, Ill. U. S. 2,409,692, Oct. 22. A container comprising a sheet of material having a central portion which forms a rectangular top wall, side portions of said sheet adjacent the edges of said central portion being disposed at right angles with said top wall to form the sides of said container.

**Chick Box**, G. Loth (to The Hinde & Dauch Paper Co., Sandusky, Ohio). U. S. 2,409,701, Oct. 22. A shipping box having a body portion comprising a rectangular bottom and side walls integral with the bottom and hinged to the side edges thereof, said walls having slots intermediate their ends extending upwardly from their bottom edges and terminating short of their top edges, and having crossing interlocking partition members with end portions fitting into slots and projecting past the outer faces of the side walls.

**Banding Machine**, C. T. Walter & L. R. Newton (to Industrial Patents Corp., Chicago, Ill.). U. S. 2,409,724, Oct. 22. A machine for banding an article with a label, having means to deliver a strip of labels including means for pulling the label strip to tension the end label of the strip around the article with the ends of the label overlapped.

**Paper Display Carton with Transparent Window**, J. D. Caimi, Everett, Mass. U. S. 2,409,736, Oct. 22. A blank assembly for a carton, comprising a bottom, end walls, end wall extensions having lock notches cut therein, front and rear wall, a tuck element crease-hinged to the ends of the front and rear walls, a cover crease-hinged to the rear wall, a tuck element crease-hinged to the cover having a locking slot at each end thereof; a window opening extending through portions of the rear wall, the cover, and the tuck element, and a sheet of flexible, transparent material covering said window opening.

**Bundle and Method of Producing the Same**, J. B. Frear (to Signode Steel Strapping Co., Chicago, Ill.). U. S. 2,409,750, Oct. 22. In a bundle, the combination of two upwardly tapered ingots arranged in base to base relationship to each other, two other upwardly tapered ingots also arranged in base to base relationship to each other and positioned in spaced relation to said first-named ingots at one side thereof, and fixed by binders.

**Method for Applying Closures to Containers**, A. G. Osborne (to Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,409,788, Oct. 22. In a method of sealing containers, having a side sealing surface, with a skirted metallic closure blank, having an annular bulge formed between

said skirt and the closed end of said blank, and having an oversize liner disposed therein, steps comprising pressing the overhanging margins of said liner into engagement with said side-sealing surface.

**Method of Sealing Containers**, A. G. Osborne (to Aluminum Company of America, Pittsburgh, Pa.). U. S. 2,409,789, Oct. 22. In the art of sealing containers having a side-sealing surface with a blank having a top portion, a depending skirt, an inwardly extending annular shoulder in said skirt in spaced relation to said top portion, and a liner of greater diameter than the outside diameter of the mouth of the container to be sealed.

**Metal Container**, W. F. Punte (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,409,793, Oct. 22. A metal container for packaging a plurality of articles, comprising a body portion, a closure therefor, and a single-piece metal member fitting within said body portion, said member being folded longitudinally to form double wall partitions.

**Tape Moving Mechanism**, R. A. Clap, Minneapolis, Minn. U. S. 2,409,834, Oct. 22. An apparatus for moving an indicia carrying uniformly perforated tape endwise by a periodic step-by-step motion comprising a guideway for maintaining said tape approximately straight.

**Bottle Closure**, E. Green (to Inter-Seal Spring Lake, N. J.). U. S. 2,409,846, Oct. 22. A closure for sealing an opening through the neck of a container, which comprises the combination of an outer cap member adapted to receive the end of said neck and having means engageable beneath external means on the neck upon rotational movement of said cap member, to hold the cap member in place.

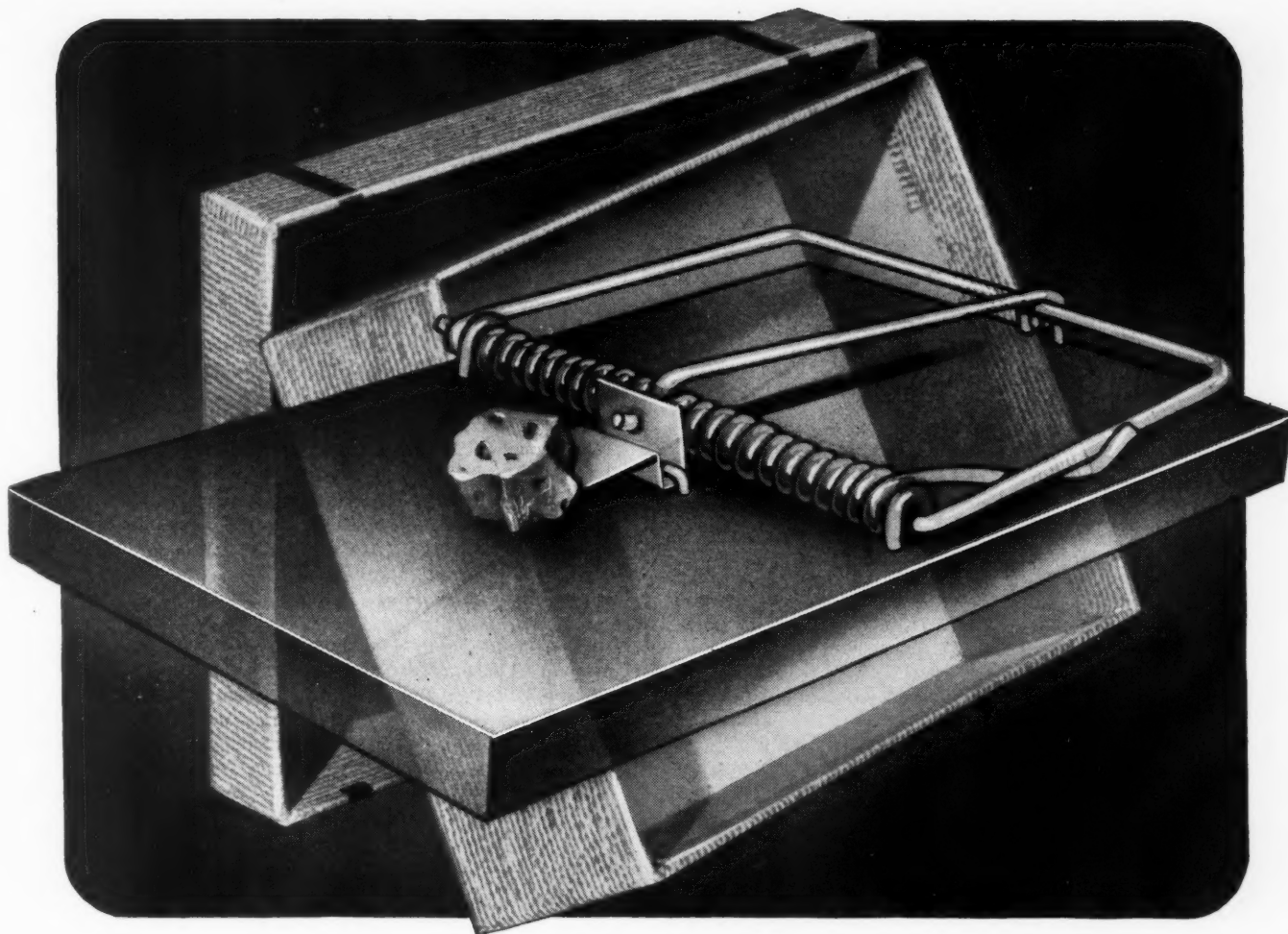
**Tape Severing Machine**, T. H. Kreuger (to Better Packages, Inc., a corporation of New York). U. S. 2,409,872, Oct. 22. In a tape-moistening machine having a frame including side walls, moistening and delivering means between said side walls, said moistening means including a tank having a capillary moisture applying element therein.

**Display Chest**, R. A. Bloom (to Oneida Ltd., Oneida, N. Y.). U. S. 2,409,926, Oct. 22. A chest for flatware and the like comprising in combination a body, a lid hingedly secured thereto and having article-holding means on its inner face.

**Dispensing Container**, H. Fleisher & J. Homer, Staten Island, N. Y. U. S. 2,409,933, Oct. 22. A dispensing device for applying a fluid to work comprising a supply vessel and a closure for the latter.

**Camera Film Box**, J. W. McCutcheon, Bronx, N. Y. U. S. 2,409,949, Oct. 22. A strip depository comprising a casing open at its front having a strip inlet in its rear wall, a hinged door at the open front of said casing, a strip receiving box slidable into and out of said casing, said box having a strip inlet in registration with the strip inlet, and knife means within box for cutting a strip of material at the strip inlet thereof.

**Fluid-Tight Package**, H. F. Waters, New York, N. Y. U. S. 2,409,998, Oct. 22. A composite strip for the continuous production of punctureproof fluid-tight packages which comprises in combination a strip of flexible material fusible on at least one face thereof, and a plurality of puncture-resistant flexible cushioning members spacedly secured to the fusible face of said strip.



## ARE BUILDING A BETTER MOUSETRAP?

**I**F so, people may be beating a path to your door - - - but, if you are not making mousetraps, you may be manufacturing some of the other billion and a half dollars\* worth of household specialties made in this country each year. Then, you probably rely for sales appeal on some of the 171 million set-up boxes sold to this industry each year. This big business — household specialties — expects an increase in unit sales volume next year of 14% over 1943 high figures. They say they prefer set-up

boxes two to one over other containers because:

1. *A set-up box is custom-built to the product.*
2. *A set-up box has greater strength.*
3. *A set-up box sells easier on sight.*
4. *A set-up box gives better product identification.*
5. *A set-up box has added "take home" appeal.*
6. *A set-up box has smart style value.*

\*Write to the National Paper Box Manufacturers Association for survey No. 91, "Household Specialties Industry", compiled by the Postwar Planning Committee.



## NATIONAL PAPER BOX MANUFACTURERS

AND COOPERATING SUPPLIERS

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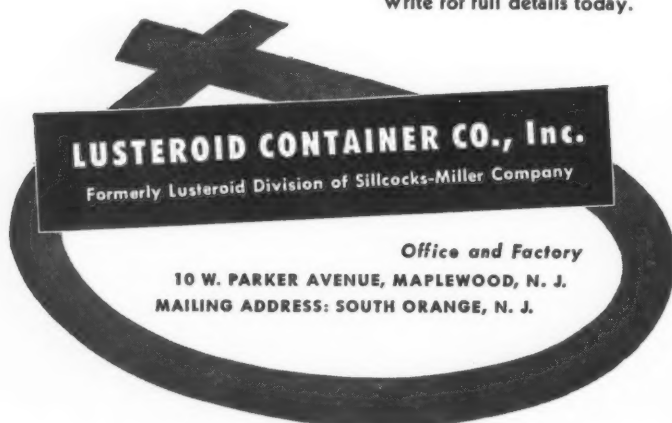
No detours when your product sails to market in LUSTEROID vials and tubes!

These modern containers carry your product . . . protect it . . . and display it to full advantage through crystal-clear walls that are strong, rigid and unbreakable. No chances for your merchandise to be damaged in transit or remain unseen at point of sale.

LUSTEROID's light weight means economy in shipping. You save on labeling, too, because your message can be printed as an integral part of the container.

Comes clear or opaque in all colors of the rainbow. Sizes  $\frac{1}{4}$ " to  $1\frac{1}{4}$ " in diameter and lengths up to 6". Cork, slip-on or screw-cap closures.

Write for full details today.



## Equipment and materials

(Continued from page 156) bags and can be easily loaded from the front or back of the machine. In a few seconds adjustments may be made for changing from one bag size to another. The aluminum blower housing is equipped with an air filter which can be replaced daily, thus affording assurance that the air going into the bags is clean and free from foreign matter. It is powered by a brushless motor.

### NEW PRODUCT FOR COATINGS

The Dow Chemical Co., Midland, Mich., announces the immediate availability of a new aqueous film-forming material called Dow Latex 512—a combination of styrene and butadiene which, when air dried, is said to form a rubbery, tough film with excellent pigment binding properties and a high protective value. Its compatibility with many aqueous emulsions or dispersions of resins, oils, varnishes, starches, waxes, casein, plasticizers and water-soluble gums and pigments is another important characteristic.

### TEXTILE WRAPPING MACHINE

By further development and adaptation of its Model FA wrapping machine, Package Machinery Co., Springfield, Mass., is now offering Model FA-2T which wraps textile products at a rate of 45 packages per minute. Practically any type of wrapping material can be used, including paper, glassine, cellophane, acetate and waxed paper. The material may be plain or printed as an electric eye device locates the printed design accurately. The machine can also be equipped with a labeling attachment either for an inside or outside label. It is quickly adjustable for a wide range of sizes by means of a hand-wheel and the changing of a few parts.

The product is placed on a plain cardboard, and the machine applies the wrapping material, sealing the seam and end-folds under the bottom of the package. Folds are made over blades rather than over the product, thereby allowing for irregularities and variations. Machine is equipped with both electric heaters and glue daubers.

### IMPROVED HOT DIP TANKS

Aeroil Products Co., West New York, N. J., announces two new dipping tanks, for applying plastic strip coatings which incorporate many new features such as air-turbine mechanical agitation and an automatically activated water cooling system.

## For your information

(Continued from page 160) formation on safe and economical loading of rail shipments. Published by Acme Steel Co., 2840 Archer Ave., Chicago 8, copies are available on request.

A simplified practice recommendation for shipping pallets for groceries and packaged merchandise by the National Bureau of Standards, Dept. of Commerce, seeks to effect economies in mass-distribution comparable to those in mass-production. The recommendation is intended to provide for as large unit loads as feasible to be transported intact on pallets from the processor's plant to the distributor's order-assembly line. Pallets are classified as single-face and double-face; each embracing both "flush stringer" and "sling (stevedore)" types. The common 2-way wooden pallet permits entry of the lift fork at either open end. The 4-way pallet permits fork entry at any of the four sides. Recommended dimensions are: for 2000 lbs. or less, 40 by 32 in., 2- or 4-way; 3000 lbs. or more, 48 in. by 40 in., 4-way. Complete recommendations may be had by writing the Division of Simplified Practice, National Bureau of Standards, Washington.



# See your Sales Climb

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\$4000

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with new *A.P.G.* packaging

More hands reach for your product when you send it to market in a bright new package — one that answers all the requirements of modern merchandising. Distinctively designed A.P.G. packaging beckons the eyes that buy, stimulates the desire for your product — and completes the sale with an informative selling message, easily read and beautifully printed. Important, too, are the perfect protection and proved economy features of A.P.G.'s transparent, semi-transparent and opaque flexible packaging. We have been helping to solve the packaging problems of nationally known manufacturers since 1893. You can take advantage of this wealth of experience at no obligation.

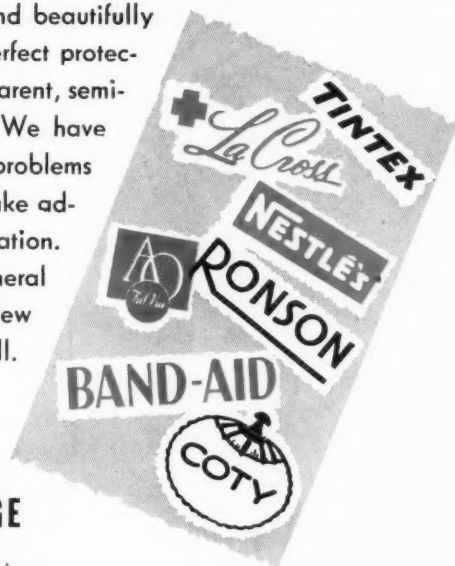
Simply mail your inquiries to our General Sales Office, 122 East 42nd Street, New York 17, N. Y. or 4711 Foster Avenue, Chicago 30, Ill.



## YOU HAVE THE PRODUCT — A.P.G. HAS THE PACKAGE

Sales-building cellophane or glassine bags and envelopes, custom-built for your own particular needs. Also a complete range of stock sizes — printed or plain.

Smartly styled opaque envelopes in special prints, and in any size you may require, as well as all stock sizes — printed or plain — in special papers or regular grades.



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OVER 50 YEARS OF SERVICE

KENSINGTON, CONNECTICUT CHICAGO, ILLINOIS

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# BIG packaging problem?

Use our complete packaging service!

- Many a business today is "sticking out its neck" by attempting to do "too big" a packaging job all by itself. Lack of equipment, shortage of space, scarcity of labor—any one or all three—may be the big packaging problem that is cutting down on your production.
- Stevens-Wiley is prepared to help you eliminate these problems by taking over your entire packaging operation or by supplementing your own packaging facilities.
- Our high speed automatic equipment will efficiently handle the mixing, filling, weighing and labeling of all types of dry powders and chemicals in cartons, cans or envelopes.
- Why not investigate today?



**THE STEVENS-WILEY MFG. CO., INC.**  
HANCOCK & W. BERKS ST., PHILADELPHIA 22, PA.

## G.E. shipping packs

(Continued from page 144) that the labels are on the outside and contents easily identified. This also permits the marker to place the address label directly below the contents label without lifting a carton.

The cartons are then hauled to stockrooms, where they are tiered and left until they are marked and transported to the car or truck accumulation area, from which they are hauled directly for shipment.

Palletizing both raw and finished materials makes inventory fairly simple. The unloading of raw materials from car or truck with the use of pallets simplifies the handling operations, since there is no unloading in the receiving department and the material is transported direct to the sub-storeroom of the department using it. By placing material in certain, definite ways, according to the type of apparatus, and having a fixed amount on each pallet, it can be rechecked if an error is made by either the vendor or the checker.

The plant-to-customer palletization operations have much to do with the satisfactory arrival of the finished product. Before pallets could be used for this purpose, it was necessary to make a thorough study of the customer's handling equipment. The results of the study determined the use of a fork truck pallet base or a two-skid base. The customer's requirements for bases range from 6 $\frac{1}{4}$  in. to 12 $\frac{1}{2}$  in. high. It has also proved important to know the door and aisle clearances, as well as the various assembly operations performed.

To use a pallet at the point of assembly has been known to require the replanning of the assembly operation. In some cases, the removal of conveyors and benches has been necessary. The pallet serves the purpose of a bench and reduces handling operations.

The proper design of a pallet requires a thorough study of the apparatus or part to be palletized, since the peculiarities, projections and weaknesses of the particular equipment must be considered. Our experience has been that packing can be simplified to such a degree that not over two packing pieces will be needed.

Corrugated sleeves or tubes, with the flutes in the corrugations running vertical and made of the proper liner board, depending upon the weight of the equipment, will protect it adequately. The equipment is held in place by double-cleated plywood dividers. The tubes are placed on top of the plywood, the cleats on the top of the bottom divider, and the bottom of the top divider locks them in place. If there is a projection on the apparatus to be tubed or palletized, a slot in the tube will, in most cases, permit the use of a smaller tube. This projection must be protected by intermediate rows of cleats on both the pallet base and dividers.

These are some of the ways in which packaging and packing problems are approached at General Electric. Special apparatus naturally requires special packing and as a result the cost is high. Naturally, therefore, apparatus manufactured in large quantities has received the most attention for it is in these items that large amounts of money can be saved in packing.

*Bright new Beauty*

**for your product**



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**Arnrus**  
(TRANSPARENT)  
**Plastic Container**

Here's another beauty . . . destined for a fertile market. And it's packaged for beauty, too — in an Arnrus Plastic Container.

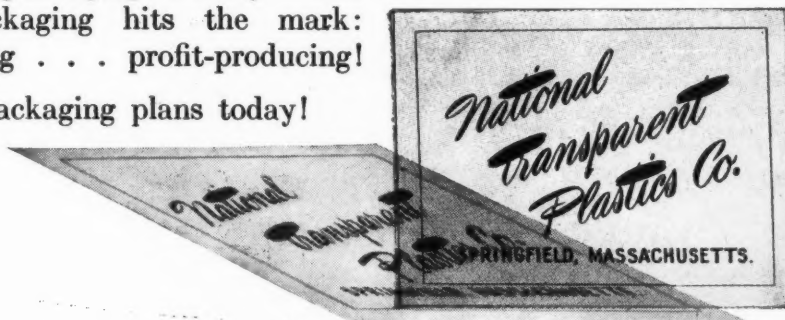
When a product's ready for market, there's a speedy, profitable way to send it . . . dust-proof and dirt-proof, as fresh and clean as the day it left the factory . . . in an Arnrus Plastic Container. Here it is that the appeal of your product leaps to the forefront — to the range of vision — where sales are made!

For the modern note in packaging beauty — and economy, too — Arnrus packaging hits the mark: transparent . . . form-fitting . . . profit-producing!

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\*It's a Hughes All-a-round Hair Brush . . .  
A Beauty! And packaged for beauty.







# Season's Greetings

***T**O ALL our customers and  
friends we send sincere  
Holiday Greetings and best  
wishes for a happy, healthy  
and prosperous New Year.*



**PARTITION CORP.**

*Manufacturers of Partitions for Paper Boxes*

**647-649 LEXINGTON AVE.  
BROOKLYN 21, N. Y.**

**Telephone: FOxcroft 9-2129**



## Packaged produce

(Continued from page 128) and Home Economics to determine the vitamin content and palatability of packaged products retailed without refrigeration as compared with those in bulk and refrigerated.

While refrigeration plays an important part in the movement of fruits and vegetables, the larger portion of retail distributors at present handles these products without it. With the shortage of refrigeration equipment and for small stores, refrigeration at the retail level is now almost prohibitive.

Under these conditions outlined in the Purdue project, results to date indicate that for quick delivery from distributor to consumer and for products packed near points of consumption, packaging may assist in the orderly distribution of higher quality fruits and vegetables. Where the packaged goods can be packed and put in the consumer's hands within a 48-hr. period or less, refrigeration at retail level under Midwestern conditions has not been found necessary with most products.

It is hoped to publish a completed report of the Purdue project the spring of 1947.

Cooperation of the following associations and companies in the produce and packaging material and equipment fields in these experiments is gratefully acknowledged: Marion County (Ind.) Vegetable Growers Assn.; Minardo Bros., Lafayette, Ind.; Lindley Box & Paper Co., Marion, Ind. (paperboard trays); Food Machinery Corp., Hoopeston, Ill. (special waxes); Inland Container Corp., Indianapolis (shipping containers); Sylvania Industrial Corp., New York (cellophane); E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. (cellophane); Celanese Plastics Corp., New York (acetate film); Great Atlantic & Pacific Tea Co.; Kroger Grocery & Baking Co., and Miller Wrapping & Sealing Machine Co., (wrapping machine).

## Pi standard test methods

(Continued from page 153) indicated readings and apply corresponding corrections to the test results. In general the calibration of the scale should be checked at three or four widely spaced points, and if appreciable errors are found, enough calibration points should be used to allow construction of a correction curve.

### 4. Reagents and accessories

A. Special graph paper made by the Henry L. Scott Co., Providence, R. I.

B. Humidity Cabinet.

### 5. Sample Test

A. *Sampling*—Five strips from each material are cut accurately with clean and parallel edges in each principle direction of the stock—with the grain and against the grain. The strips are made one inch wide and at least five inches long. When testing weak



## How infrared rays solved a glassmaking problem

Shortly after the war shut off all imports of handmade bottles, an Armstrong customer brought in an unusual glassmaking problem. One of his specialties had been packed in a handmade bottle with a distinctive raised medallion. Could we help him maintain package identity by reproducing this special bottle?

The bottle and the medallion could not be blown in one piece by automatic methods. And even after the design department made molds that exactly reproduced the bottle and medallion separately, the problem of bringing them together remained.

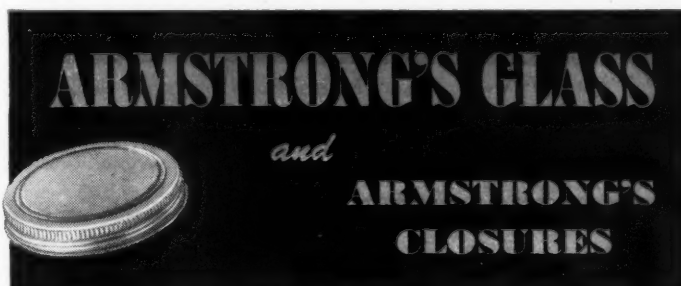
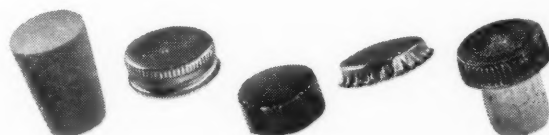
Fusing proved too costly. Finally, one of Armstrong's adhesive specialists suggested gluing the medallion to the bottle and formulated an adhesive that held the two together perfectly . . . in Armstrong's laboratory.

On the customer's assembly line, however, the adhesive apparently lost its grip. The medallions fell off constantly, until an Armstrong technician, hurriedly dispatched to

the plant, came up with an unusual suggestion: "Run your bottles and medallions through a bank of infrared lamps before you apply the adhesive, and they'll stay together." And they did! The heat from the lamps on the bottles dried the unnoticed moisture which had prevented the adhesive from working properly.

Whatever your particular glass or closure problem, you're sure of the best in technical advice when you bring it to Armstrong. 196 trained technicians in Armstrong's Central Technical Research Laboratories and dozens of experts in Purchasing, Package Design, Traffic, Engineering, Production Planning, and other departments are constantly on the job to make sure you get the best possible glass and closure service.

For details on Armstrong's glass or closures call your Armstrong representative or write direct to Armstrong Cork Company, Glass and Closure Division, 5912 Prince Street, Lancaster, Pennsylvania.



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Roy L. Peat, President

Established 1920

materials or those with little distensibility for elongation, the strips are cut two inches wide in order to obtain more accurate results.

*B. Preparation*—Materials which are to be tested for elongation are generally humidified at 75 deg. F., 50% relative humidity for two hours before testing.

## 6. Procedure

*A. Standard Conditions*—Tightly clamp one end of each strip in the upper jaw after placing the strip loosely in the lower jaw and checking its alignment. Then tightly clamp the lower end so that the sample is taut and apply the load. The tensile strength in pounds is recorded on the dial. When values for elongation are also desired—attach the Serigraph pen arm and place the graph paper in position and elongation is automatically recorded on the graph paper.

*B. Exceptions*—Basic papers such as wet strength stocks are tested for tensile strength when wet as well as dry. The specimens are immersed in water for 24 hrs., and then placed between blotters or paper toweling for 15 min. to remove excess water. Then the procedure follows that for standard conditions.

## 7. Calculations

The results for tensile strength with and against the grain are averaged separately. The distances in inches traced by the Serigraph arm are multiplied by 100 which equals percentage elongation. The percentages are averaged for the final result.

## 8. Precision and reproducibility

If the mean value of the lowest and the highest reading differs from the average of all the readings by more than 5%, more specimens are tested until there is agreement within this limit.

## 9. Report

Results obtained for tensile strength with the grain and against the grain are reported as tensile strength in lbs. per linear in. WG (with the grain) and AG (against the grain). Elongation values are reported as percentages to the first decimal place with the grain and across grain, wet or dry.

## 10. Interpretation of results

An isolated very high or low result which is not repeated in duplicate, shall be discarded when a consistent average is obtained without the abnormal reading. Reject readings from individual strips if the strip slips or breaks in or at the edge of the clamps.

## 11. Remarks

When heavy, very plastic materials which may be greatly elongated are tested, the jaws on the tester are set closer at the start of the test.

## 12. References

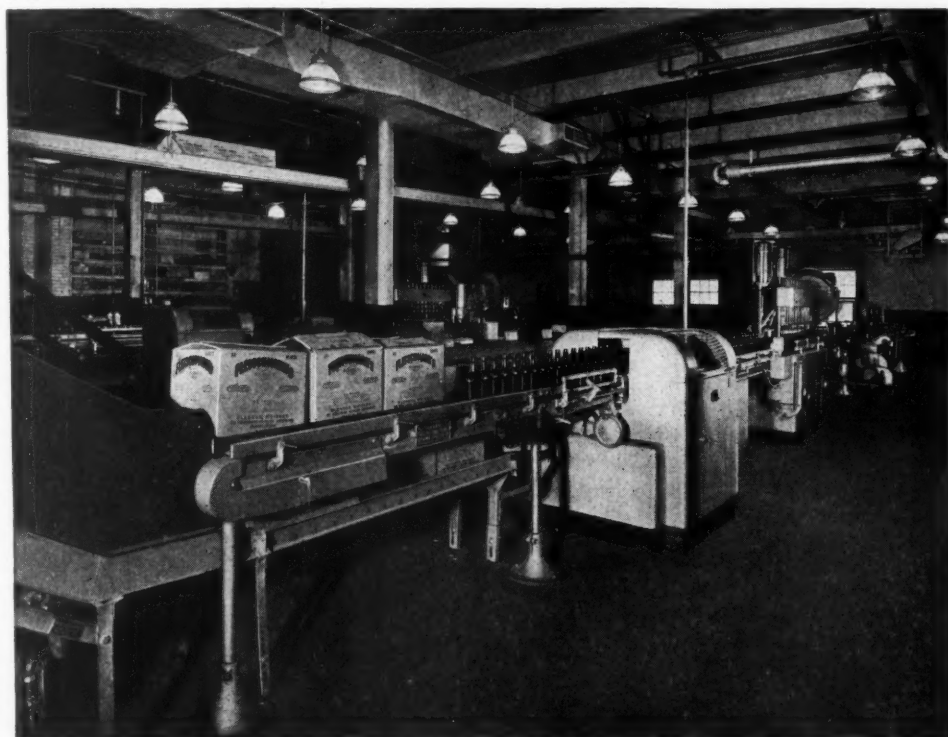
T.A.P.P.I.—*Testing Methods, Recommended Practices, Specifications*. T 404 m-41 *Tensile Breaking Strength of Paper and Paperboard* and T 457 m-42, *Stretch of Paper and Paperboard*.



**I** N WINES AND LIQUORS THE NAMES THAT COUNT  
*...count on PNEUMATIC!*

Here is a partial list:—

ROMA • PETRI • SAN MARTIN • LA SALLE • VIRGINIA DARE • MONTE CASSINO



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 SOUTHERN COMFORT • GILBEY'S • CINZANO • SCHENLEY'S • MINUTE MAN RUM



*Complete automatic line of Pneumatic equipment including machines for cleaning, filling, capping and labeling, operating in the Fleischmann plant at Peekskill, N. Y.*

Name your brand and it's a pretty safe assumption a Pneumatic machine had a prominent part in cleaning, filling, labeling or capping the familiar bottle it comes in. In fact a number of leading wineries and distilleries use complete lines of Pneumatic equipment.

For over fifty years Pneumatic has led the way in meeting the mass production needs of the packaging field. This long experience has provided an engineering and manufacturing knowledge and background at Pne-

matic second to none in the field. Because they are more sound in design, more precisely and substantially constructed, Pneumatic machines operate at "lower cost per container." That's why they are so widely preferred—why you will find Pneumatic bottling machinery your best choice, too. . . . PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Avenue, North Quincy 71, Massachusetts; Branch Offices in New York, N. Y.; Chicago, Illinois; San Francisco, California; Los Angeles, California.

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**PACKAGING AND BOTTLING MACHINERY**

Over eighty different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids



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and  
Utility!*

FOR ALL TYPES  
OF PACKAGING

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lovely to look at...  
longer! For, these  
remarkable, new  
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Plastic Coat-  
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your pack-  
age with  
cover-girl  
charm,  
and as-  
sure you  
complete  
product  
protection.  
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makes plastic  
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service. Safely waterproofs,  
moisture-vapor proofs and guards  
against insidious dust, mildew, acids and  
rust. **CLEARSEAL'S** new modern plant assures you a  
prompt and efficient flow of goods. Take the **CLEAR-  
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## Frozen foods . . .

(Continued from page 112) considering packing some frozen items in cans during 1947. Should this win public acceptance, then the packer may in 1948 put up a full line in tin.

The foundation has so far examined two experimental containers which may meet consumer and processor requirements at costs considerably less than over-all packaging expense levels now prevailing. Because of the fundamental importance of packaging the Foundation is carrying on a positive package improvement program with both packers and retailers.

While this "merchandise's" review of packaging problems has been mainly concerned with design, it is recognized that much work also must be done on basic fundamental characteristics such as water-vapor transmission rates, waterproofness and greaseproofness.

The major contribution of the Foundation's packaging laboratory will be to determine the packaging needs for effective merchandising of frozen foods, translate these requirements into meaningful terms for the container industry, and then act as a coordinating channel between the industry and Foundation member stores in developing specifications and designs to meet needs.

Because the frozen food merchandising activities of Foundation members are perhaps more highly developed than those of any other group of frozen food retailers—especially from the standpoint of regularly serving homes with adequate zero storage space—the Foundation may be somewhat in advance of the field in feeling the impact of frozen food packaging problems.

These packaging problems should not be considered as merely applying to Foundation members in particular or department stores in general. The container problems on which the Foundation's packaging laboratory is working today may be the problems of the whole industry tomorrow. A prompt, coordinated attack on these problems, therefore, can put all elements of the industry in a better position to capitalize on frozen foods.

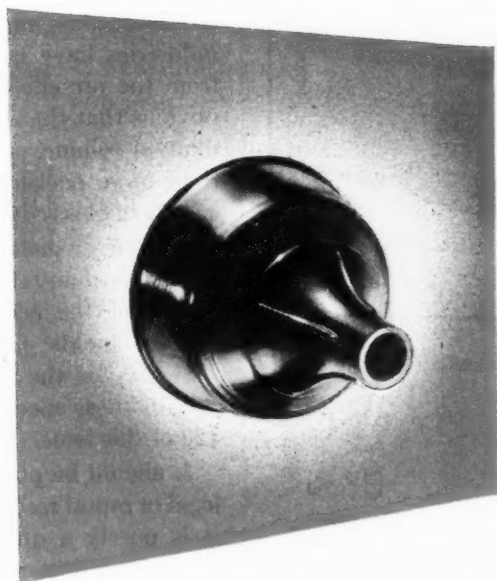
## Kroger labels

(Continued from page 99) blue field occupy only a limited portion of the label area, with ample space left for identification and description of the packaged product. Whenever possible, photographs will be used to help the consumer visualize the products. Labels carry an unusual amount of information including number of servings, instructions and recipes.

Kroger feels that this dressing up of private brands will in no way weaken nationally advertised brands in Kroger stores, because they are already backed by selling methods to produce quick turnover.

Kroger is the third largest chain in volume, second in number of stores (2,739). The company was founded by B. H. Kroger, in 1882.

CREDIT: Label designs, Raymond Loewy Associates, New York.



## SMALL PLASTICS ON A **BIG SCALE**

Owens-Illinois is proud of its reputation as a *specialist* in small plastics.

The automatic machines that mold our precision closures also produce millions of thermo-setting plastic units—designed for hundreds of different uses. Each conforms to the exacting Owens-Illinois standards of strength and uniformity.

Owens-Illinois "know-how"—based on both research and production experience—assures a combination of speed and economy on volume production. If you need small plastic units in large quantities, we are ideally suited to serve you.

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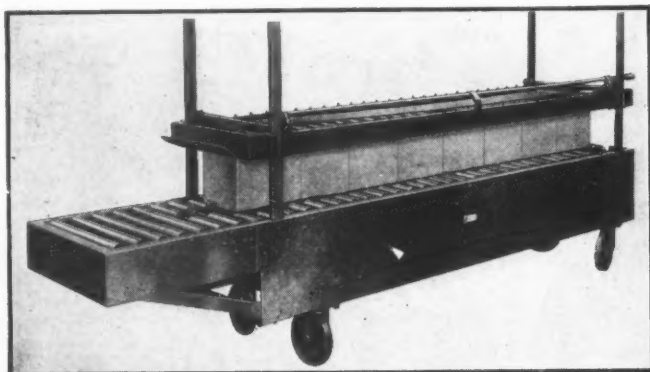


TRADE MARK

PLASTICS DIVISION  
**OWENS-ILLINOIS GLASS COMPANY**  
 TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



## Increase Efficiency ... Cut Mfg. Costs



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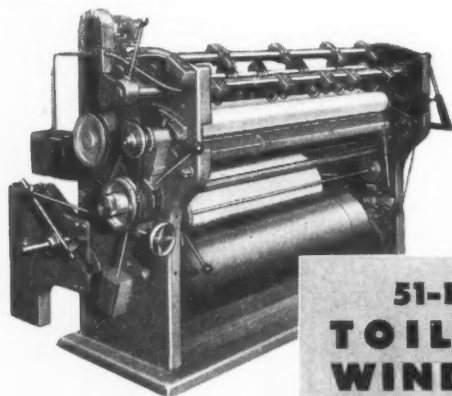
Designed for plants with limited production runs. Applies pressure to corrugated container flaps while adhesive sets, eliminating several operations. Reasonably priced.

Adjustable for containers 3' to 26" wide, 4" to 40" long, 1½" to 30" high.



**Special  
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Packaging machines  
correctly designed and  
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### 51-B TOILET WINDER

*Designed for Economy  
Speed  
Quality*

A SURVEY of production records indicates that our 51-B post-war winder is "tops." Space forbids telling our entire story here, but a request from you will bring more detailed illustrations and complete descriptive information.

**HUDSON-SHARP**  
MACHINE CO. • GREEN BAY • WIS

## The private mold situation

With the single exception of the cosmetic industry, lifting of Limitation Order L-103, permitting a return to fancy and private-mold glass containers, will apparently have little immediate effect on packaging. The large glass makers supplying the food and beverage industries have been quick to discourage any change from the present standardized practice, and since it is obvious that the use of special molds would reduce production volume, no great demand is expected to develop from large packers as long as they are stretching the supply of glass containers to the limit.

The larger glass makers have marshaled cogent reasons against any change of molds for some time to come. A few of the companies who normally specialize in private molds for cosmetic and other trades will naturally be the first to return to them. One of the first of these specialties is shown in an article on page 120 of this issue.

It should be pointed out that there is no longer any legal or moral restraint against the use of private molds; it is purely a question of supply and demand. The cosmetic industry is one of the few that can, at this point, make the choice for package individuality as against package volume. The peculiar position of the cosmetic makers has been recognized by CPA in numerous exemption orders over the last few months which permitted them to prepare molds and produce test quantities of new containers against the day when restrictions could be lifted.

The glass makers generally point out that they are already laboring under a demand for 25% more containers than they can produce, and that any major shift to private molds would reduce even the present grossage by 18 to 25%. Shortage of soda ash is the limiting factor which forbids any increase in over-all glass production for possibly a year to come. Far more containers can be produced with the available soda ash in standard, lightweight shapes than in the heavier fancy molds. Only by continuous, mass production without shutdowns for change of molds will it be possible to meet demands for containers at anything like the present level.

"I think," said one glass maker, "that the packaging trade is pretty well convinced that the only way to get the maximum quantity of packages is to use standardized glass containers and that, therefore, they will not turn on the real heat (for private molds) until supply is closer to demand."

Nevertheless, some concessions to the demand for individuality in certain lines are bound to be made as time goes on. One evidence of this is the new "standard fancy oval" jar for food packers which made its appearance just prior to the lifting of L-103.

One glass maker comments: "It will only be by the mass production of standardized items that the glass container will be enabled to compete successfully with other packages and hold its present volume."

**The case that goes  
back for more is  
paperboard glued with**

# URAC RESIN 180

Today, manufacturers can save money and trouble by using paperboard boxes for reshippers.

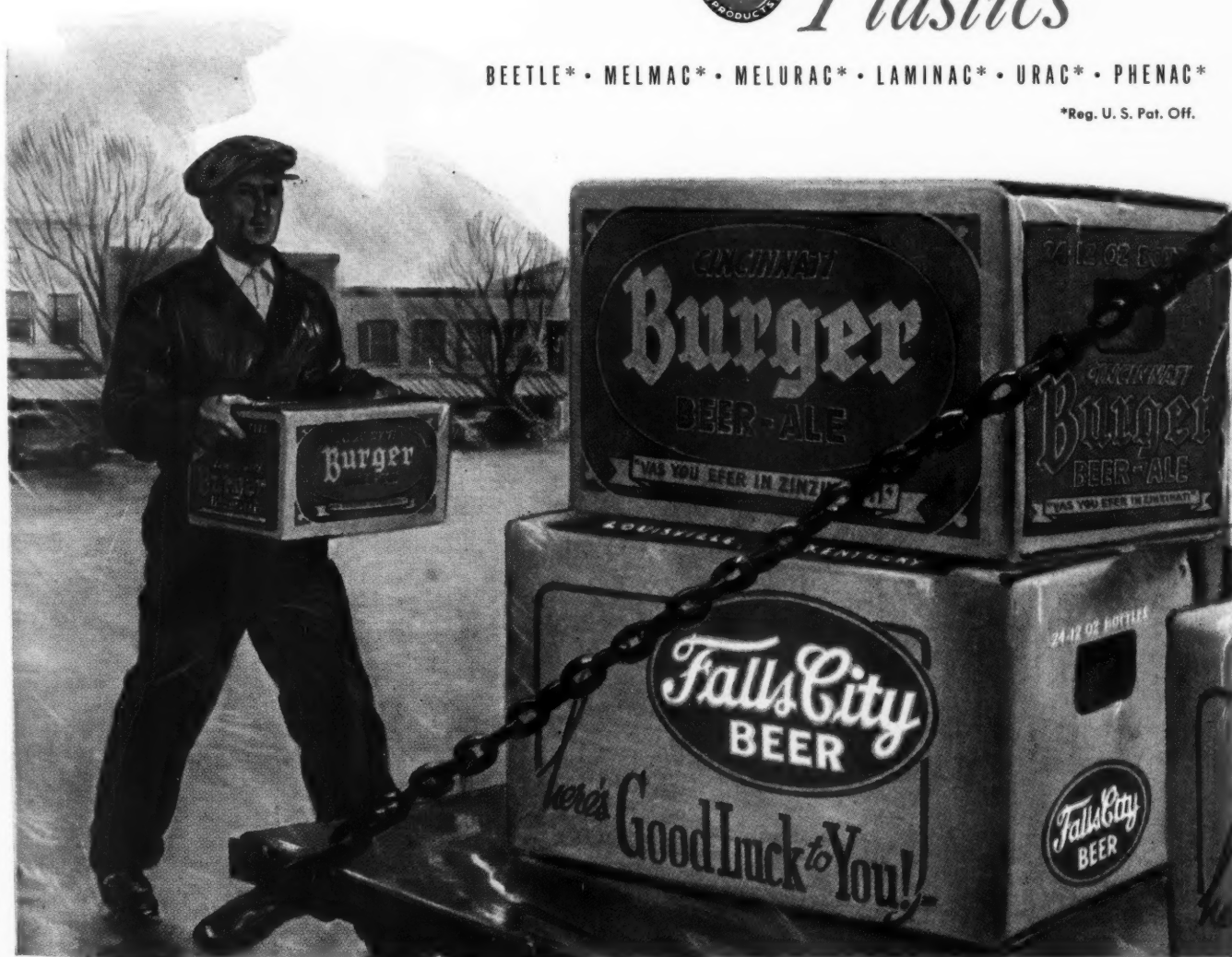
In the first place, corrugated containers, glued with resin-starch adhesives incorporating Cyanamid's URAC\* resin 180, cost less than wooden cases. Secondly, they can stand rough handling since they have enough resiliency to "give" rather than break under impact. Besides all this, they're lighter in weight than wood, thereby cutting shipping costs. The bond which holds containers together is water-resistant and won't deteriorate when exposed to dampness during storage or in transit.

All types of water-resistant corrugated containers, solid fiber containers, spirally and convolutely wound tubes for packaging and shipping can be glued successfully with adhesives using URAC resin 180 in conventional starch pastes. Contact your box supplier or paper mill direct, or write Plastics Division, American Cyanamid Company, 34B Rockefeller Plaza, New York 20, N. Y.

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**M**ay yours  
be the joy,  
the hope and the  
good-will that  
is **C**hristmas.

Hazel-Atlas Glass Company





The housewife with this product on her pantry shelf is prepared for any occasion calling for real lemon juice. REALEMON, packed by the Puritan Company of America, Chicago, Ill., is fine for drinks, for cooking or for flavoring.

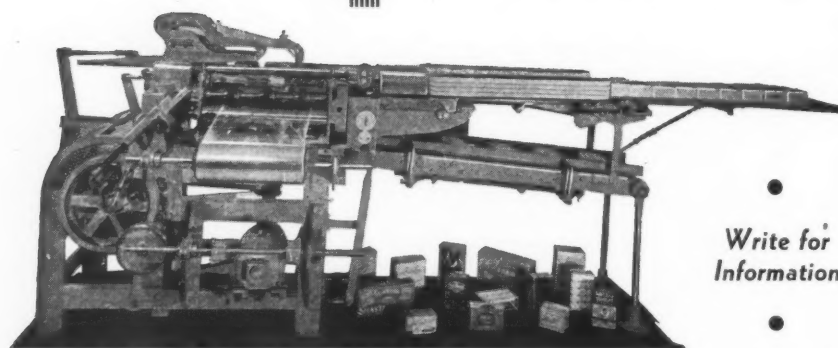
Closures just *have* to be good to seal lemon juice, so no wonder Crown Deep Hook Thread Closures were selected. Adding to their perfection are laboratory controlled liners of correct material and thickness but, primarily, it is the patented thread formation that spells the success of these closures. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

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3-way protection of Kraft, laminating agent and cellophane—but saves the double wrapping necessary with other type locker wraps. When used correctly, Pak-safe\*-wrapped products are as delectable as before freezing, retaining all their original taste, eye-appeal and sales-appeal. Obtainable in large Bulk Rolls and Resale Rolls: 18" and 24" widths. Immediate delivery from stock. Send for samples today.

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\* A Milgate Product—your assurance of quality.

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● There is nothing  
quite so fine

## VENETIAN GLASS



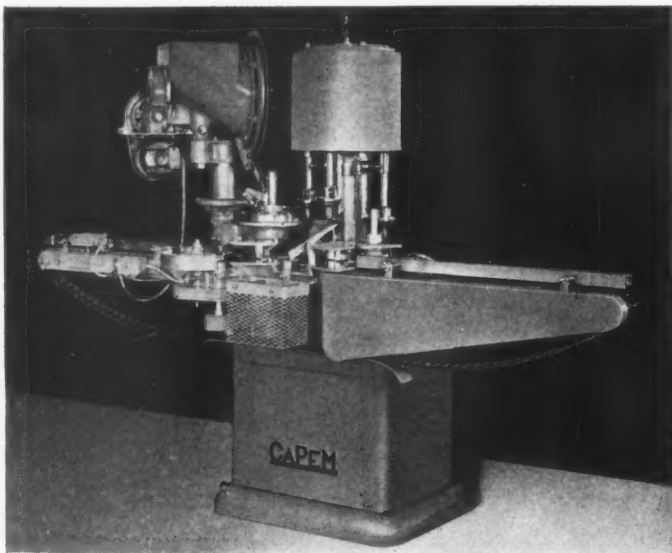
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SCREW-CAP AT 2000  
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DELIVERS A LEAKPROOF  
SEAL... AT LOW COST**

**Available in 1, 2, 3, and 4 spindle models**

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**Decorators  
on Glass  
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**4 Colors in  
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packages  
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Over and above all others is one quality which the package designer requires in a plastic material. This is versatility. Because the phenolics are the most versatile of all plastics, he usually starts here when looking for the plastic that fits his job.

Non-bleeding, for example, is a "must" property when it comes to closures—one reason why more closures have been molded of Durez phenolics than of any other plastic material.

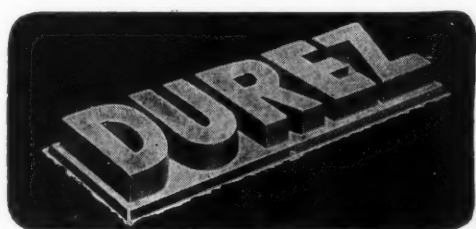
Then there is diversity of finishes—an important property for decorative containers. Again Durez phenolics meet the test. Various effects are easily achieved.

Excellent moldability, of course, is highly desirable too. Here again Durez "fills the bill" by being readily formable to unusual design.

In addition, the more than 300 Durez phenolic molding compounds possess, in varying degrees, such properties as

heat resistance, impact strength, dielectric strength, and resistance to acids and alkalis—all invaluable to the imaginative designer.

Perhaps you have a plastic material problem. If so, the benefits which Durez' twenty-six years experience as specialists in the production of the phenolics can bring you and your custom molder, are available for the asking. Durez Plastics & Chemicals, Inc., 2512 Walck Rd., N. Tonawanda, N. Y.



PHENOLIC  
RESINS

MOLDING COMPOUNDS

INDUSTRIAL RESINS

OIL SOLUBLE RESINS

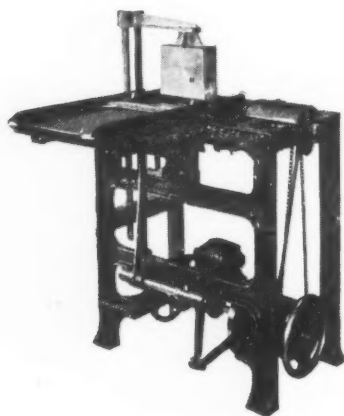
**PLASTICS THAT FIT THE JOB**

## PLANNING FOR 1947? HERE'S AN IDEA

When you're figuring ways to get more production and increase profits in 1947, here's something to think about:

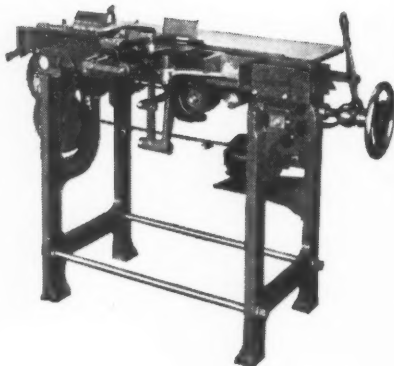
*You can step up your production, use less labor and show more profit by replacing present hand carton packaging methods with PETERS economical carton set up and closing machines. They are showing substantial savings for users everywhere.*

Send samples of the cartons you are now using. We will gladly make recommendations for your requirements.



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35-40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to handle several size cartons.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35-40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made to handle several different size cartons.



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YOUR PRODUCTS  
in Weinman  
TRANSPARENT  
PLASTIC BOXES

*in 1947!*



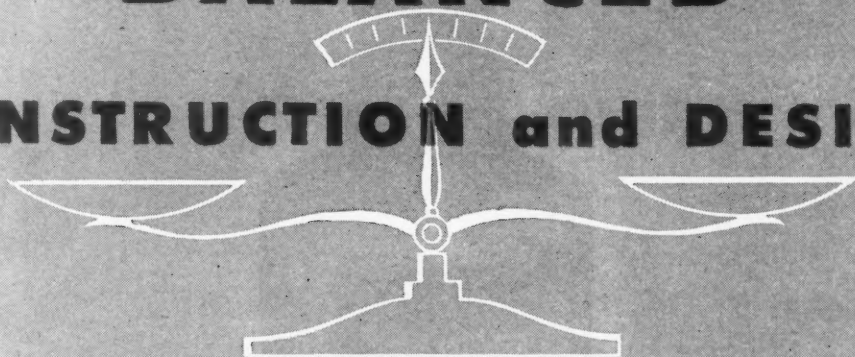
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Toys  
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**CONSTRUCTION and DESIGN**



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**FOLDING CARTONS**

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# RIGHT DRESS!

by PALM-FECHELTER

As faultlessly dressed as a soldier on parade — that's your package with a Palm-Fechteler Novar decal. The simplest container is transformed into a dress uniform for your product by applying a bright-colored Palm-Fechteler decal. And there's no trick to applying them — you can add them to your package right on the production line in your own plant.

Palm-Fechteler Novar decals on your transparent containers not only decorate but identify your package. We have a trained staff of skilled artists who will make them to your order or create them

especially for you in any design or color.

And besides—Palm-Fechteler decals are alcohol proof (a highly important factor in labelling perfumes, toilet water and liquors) — soil proof and scuff proof. Applicable to glass, ceramic and plastic surfaces, they enhance without obscuring the contents of the transparent container.

Write for information and samples.

P. S. Palm-Fechteler manufactures a complete line of decals for delivery equipment, point of sale advertising, ceramics, or any spot that meets the eye.

**PALM, FECHTELER & CO.**  
220 W. 42nd ST. • NEW YORK 18, N.Y.

*Creators of Quality*

*Decalcomanias since 1856*



## RIBBON BOWS

*by Parfait*

**LEND A  
CROWNING TOUCH**



So often the last touch is the important touch—to make your package outstanding and give it extra sales appeal. That's the Parfait Touch—achieved with Parfait "Slip-On" Ribbon Bows.

On cosmetic and candy boxes, on gift wrappings, they are always distinctive, always in good taste.

Other Parfait creations include artificial flowers and leaves, fabric novelties and display materials.

For the ultimate in package decoration it's Parfait Products.



# 3"STAR" ADHESIVES

## LABELLING GLUE

## CARTON SEALING GLUE

## CASE SEALING GLUE

**BINGHAM BROTHERS COMPANY**

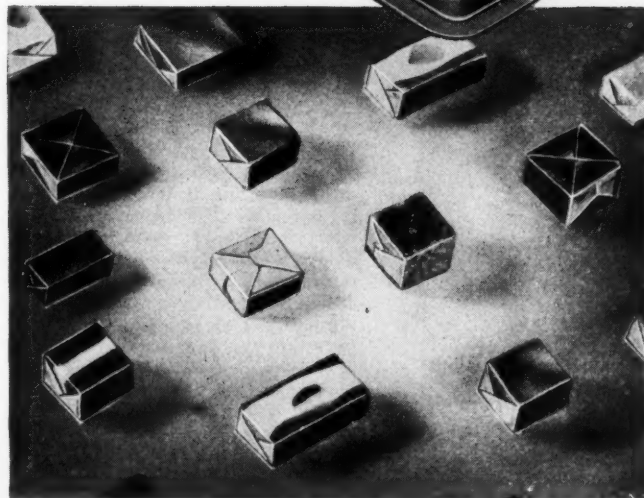
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BALTIMORE • PHILADELPHIA • ROCHESTER • NEWARK • GARWOOD

## INDIVIDUALLY PROTECTED CANDY

The ROSE EAGLE Plastic Caramel Forming and Wrapping Machine INDIVIDUALLY PROTECTS CANDY with colorful, attractive, neat wraps. Increases impulse-buying sales. Permits eye-catching, appetizing display plus brand identification. INDIVIDUALLY PROTECTED CANDY is unaffected by weather conditions—stays fresh longer. Hygienically protected from dirt, moisture and handling. The Rose Eagle forms, cuts and neatly fold wraps square or rectangular pieces at speeds up to 500 per minute.

USED BY THE COUNTRY'S  
LEADING CONFECTIONERS

Write the Rose Machinery Division for new circulars on this and other Rose Candy Machines



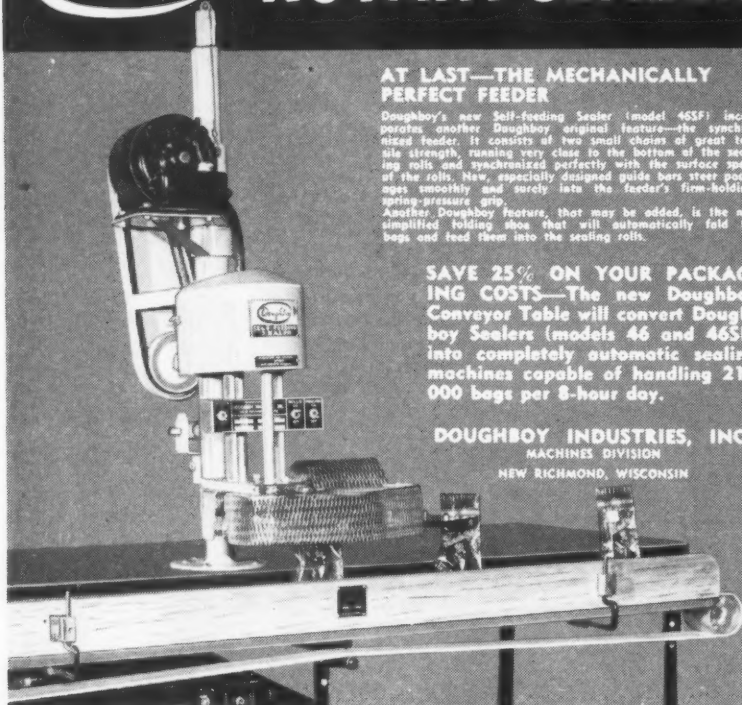
**AMERICAN MACHINE & FOUNDRY CO.**

511 FIFTH AVENUE, NEW YORK 17, N. Y.





## NEW AUTOMATIC SELF-FEEDING ROTARY SEALER



### AT LAST—THE MECHANICALLY PERFECT FEEDER

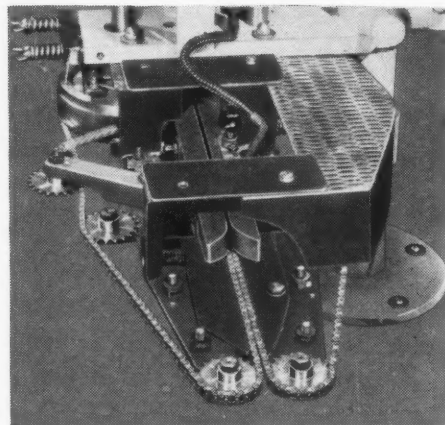
Doughboy's new Self-feeding Sealer (model 46SF) incorporates another Doughboy original feature—the synchronized feeder. It consists of two small chains of great tensile strength, running very close to the bottom of the sealing rolls and synchronized perfectly with the surface speed of the rolls. New, especially designed guide bars steer packages smoothly and surely into the feeder's firm-holding, spring-pressure grip.

Another Doughboy feature, that may be added, is the new simplified folding shoe that will automatically fold the bags and feed them into the sealing rolls.

**SAVE 25% ON YOUR PACKAGING COSTS**—The new Doughboy Conveyor Table will convert Doughboy Sealers (models 46 and 46SF) into completely automatic sealing machines capable of handling 21,000 bags per 8-hour day.

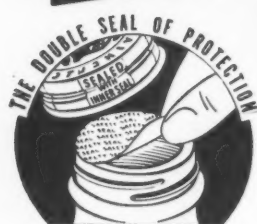
**DOUGHBOY INDUSTRIES, INC.**  
MACHINES DIVISION  
NEW RICHMOND, WISCONSIN

## New Features



**FASTER PACKAGING — LOWER COSTS** with the new Doughboy Self-feeding Sealer that handles all heat-sealing materials automatically and uniformly at the rate of 70-80 average size bags per minute. It also seals paper labels onto cellophane bags at far greater speeds than are possible manually.

*On Guard*  
**AGAINST  
MOISTURE  
INGRESS**



**Filma-  
Seal**

CAP AND SEAL APPLIED AS ONE



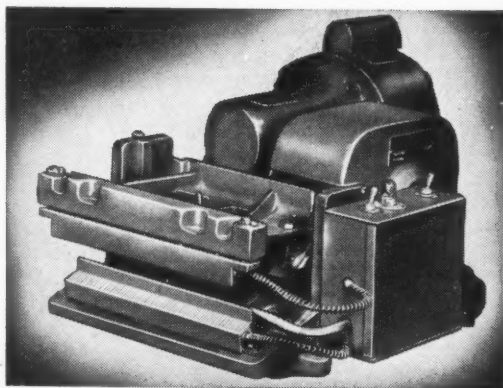
With Filma-seal® you can keep the moisture out of your package and at the same time disclose tampering and prevent contamination. A Filma-sealed® bottle—without additional wrapping, cartons, etc.—is the perfect package for the modern self service store. Contents are fully visible—yet guarded till the innerseal is peeled off by the consumer. Gutmann Screw Caps and Filma-seal® innerseals are applied in one quick operation.

**FERDINAND Gutmann & COMPANY**  
SINCE 1890

\*Reg. U. S. Pat. Off.  
and abroad

3601 • 14th AVENUE, BROOKLYN 18, N. Y.

## Heat Sealer



Wrapade automatic and semi-automatic heat seal machine handles foils, cellophane and other heat-sealed materials. It applies correct amount of heat and pressure in proper time cycle to make secure and lasting seal. Can be operated with perfect efficiency by unskilled labor. Applies uniform pressure, resulting in sift-proof, tamper-proof, dust-proof and sanitary packages without glue or staples. Saves its own cost in bag size, staples, glue, etc. Call or write for immediate delivery.

Now in use by many leading packagers.

**WRAPADE**  
**MACHINE COMPANY, INC.**

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Telephone: NEvins 8-8052-3

**TAKES THE "BUGS" OUT OF TAPE MOISTENING**

# Automatic Moistening Control



**safeguards shipments, speeds sealing, improves appearance!**

Automatic Moistening Control is a patented feature of Counterboy tape machines. Assures correct moistening ... automatically, instantly ... and safe, fast sealing.



*Better Packages, INC.*

SHELTON, CONN.

World's Largest Manufacturers  
of Tape Dispensers

DECEMBER • 1946

189

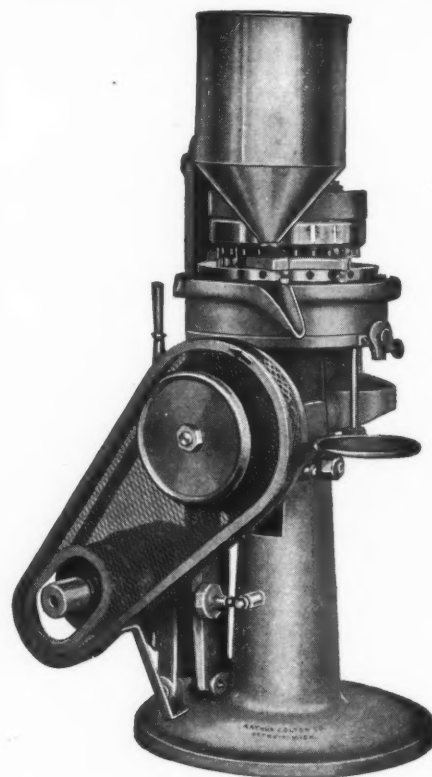
# NEW

## ROTARY TABLET PRESS

New series 200-25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

Special features include new variable lower punch pull-down track plus micrometer cell adjustment minimizing punch and die wear and practically eliminating capping; solid steel tie bar; centrally located main drive shaft; lower center of gravity. Range of operating speeds is provided by built-in variable speed drive. Power transmitted through lever operated disk clutch. Special drive materially reduces power consumption. Standard speed motor. Capacity per minute: 300-800 tablets. Diameter of tablet 3/16" to 5/8", maximum depth of cell: 11/16". Floor space: 30" X 36", height: 60", net weight: 1025 lbs.

**ARTHUR COLTON COMPANY**  
2602 E. JEFFERSON AVE., DETROIT 7, MICHIGAN





**complete  
plastic  
display  
fabrication**

**"ALL UNDER  
ONE ROOF"**



This gauze pad dispenser, made for one of the leading surgical supply houses, illustrates one of the many unusual plastic display assignments executed by Printloid.

Consult with our design staff now.

Write for our new 1946 catalog of special plastic fabrications.



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93 MERCER STREET, NEW YORK 12, N. Y.

*"The House That Plastic Built"*



# HUMITUBE

REG. U.S. PAT. OFF.

**A Pioneer Converter of  
Containers Made of**

**DU PONT  
Cellophane**

BAGS • ENVELOPES • POUCHES • PLAIN  
OR PRINTED • TRANSPARENT STRAWS

**HUMITUBE MFG. CO.**  
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**MEAD**  
*papers*

ESTABLISHED 1846



**"I don't know, mister  
... but I'll find out."**

The Mead Paper Man is getting a lot of questions these days. . . . "Heat is ruining our product before the consumer gets it. Can you protect it with paper?" . . . "Can you make a paper that keeps out gases?" . . . "We need help against moisture. What can you advise?" . . . These and other questions — involving cold, vapors, greases, and other profit-stealers — fill the Mead Paper Man's mail.

To some, he has the answer. To others, he can only say: "I don't know, mister . . . but I'll find out!" And find out, he will; for the Mead Paper Man is the research laboratory of the Mead New Products Division, where the development of *functional* papers is a continual challenge. And behind the New Products Division is one of America's most versatile paper manufacturers, now rounding out its first full century of experience. . . . Any questions?

## **NEW PRODUCTS DIVISION**

**THE MEAD CORPORATION**

**CHILLICOTHE, OHIO**

DECEMBER • 1946

191

STECHER-TRAUNG GIVES YOU  
COAST-TO-COAST SERVICE ON

*America's  
Finest  
Packaging!*



**Y**OU save time and money when you use Stecher-Traung's efficient service. Two great, modern plants, ideally located...plus sales offices, with travelling representatives, in all principal metropolitan areas.

Facilities for producing the finest FULL Color lithography are unexcelled. That's why so many of America's leading companies depend upon Stecher-Traung for high quality packaging... that's why it will pay you to get in touch with Stecher-Traung when in the market for FULL Color labels, box wraps and cartons that really sell!

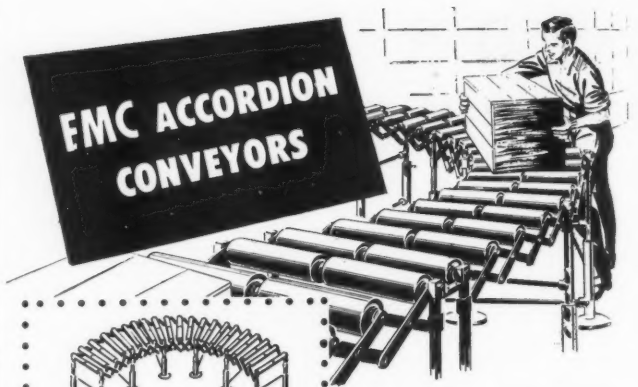


Labels • Box Wraps • Seed Packets  
Folding Boxes • Merchandise Envelopes and  
Cards • Advertising Material

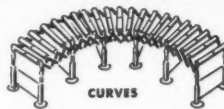
**STECHER-TRAUNG**  
**LITHOGRAPH CORPORATION**

Rochester 7, N. Y. • San Francisco 11, Calif.

Offices in Principal Cities

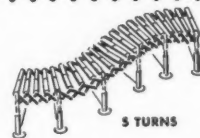


**EMC ACCORDION  
CONVEYORS**



CURVES

Roller design keeps box on conveyor regardless of curves



5 TURNS



EXTENDED

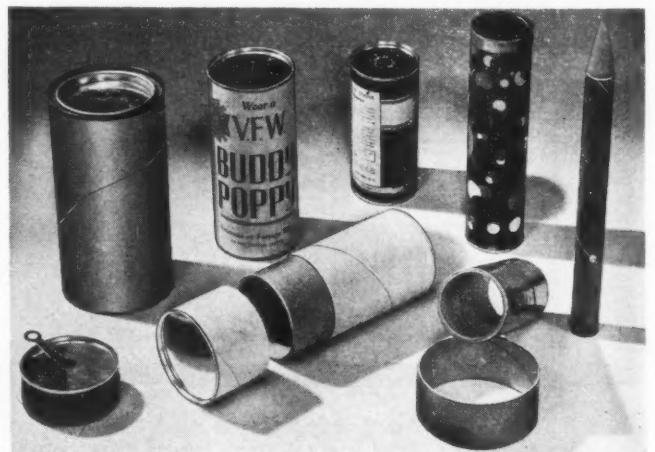


COLLAPSED

**An ideal answer  
to any package  
handling problem**

Wherever materials must be handled, set up one or more sections of this sturdy, flexible, and efficient conveyor in a few minutes. Save time, space, and labor...reduce handling costs. Ends "aisle-jamming," because it eliminates need for trucks and dollies. Collapsible, spring steel side frames, roller capacity 80 lbs. each. 60" and 100" lengths, various roller widths. For free literature on EMC standard and accordion conveyors, address Dept. P.

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RIVERSIDE DIVISION: RIVERSIDE, CALIFORNIA



**ROUND TUBES AND PACKAGES**  
*Available Now!*

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available immediately! Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

**PACKARD CONTAINER CORP.**

5811 Park Avenue

West New York, New Jersey

Phone Union 5-5818

# All Loads Lead to. **ALVEY**

## SAINT LOUIS



MOVE MORE GOODS  
FOR LESS ...

- LESS TIME
- LESS BREAKAGE
- LESS COST

with **ALVEYORS**<sup>\*</sup> the word for every **CONVEYOR** need!

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ALVEY CONVEYOR MANUFACTURING CO., 3201 SOUTH BROADWAY, ST. LOUIS 18, MO.



## It's as Clear as CRYSTAL

It's as clear as crystal that a PATHWAY crystal-clear container puts your product in a brilliant spotlight of its own. Both on the counter and in the home, a PATHWAY plexiglas display piece such as the perfume container or jewelry case illustrated here becomes a sparkling luxury setting for your product. Not only do PATHWAY packages have an irresistible appeal in today's highly competitive market, but they will also be long admired and treasured for themselves on the dressing-table.

Besides, PATHWAY containers are stamped with your individuality. Each package is especially designed right in our plant by PATHWAY's staff of expert designers. Each package is an original, created for your product and representing your product alone.

Manufacturers who know what unique packaging can do for their products are well aware of the merchandising power of PATHWAY plastic packages. Let PATHWAY point the way forward for your product.



29 Jumel Place

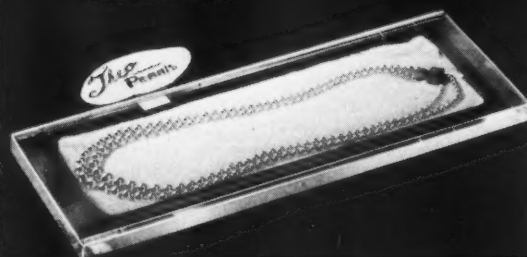
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PERFUME  
CONTAINER



CIGARETTE OR  
JEWELRY CASE



## Fine Display Settings An Essential Part of Modern Packaging!

☆  
Window  
or  
counter display  
created for  
Speidel Company

☆



## For Leadership at "Point of Sale"



36 pages...  
420 pictures...  
an exhibit of performance.  
Write for a copy of it today on  
your business letterhead.

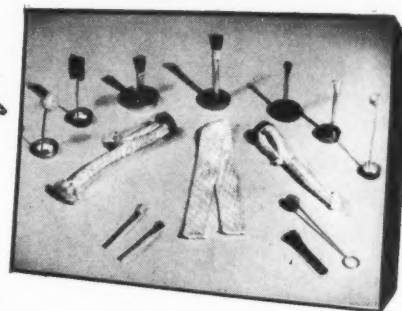
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Merchandise Presentation

**W. L. STENSGAARD AND ASSOCIATES, INC.**  
388 N. Justine St. • Chicago 7, Ill.



## May We Suggest...

Now is the time to employ our counsel and services to insure best acceptance, maximum use, consistent results. We are a Display Agency and cooperate fully with your advertising agency to "Pipe-in" the force of national advertising.



## Do YOU Have a CAP-ATTACHMENT— Problem?

WE'LL PUT ON OUR THINKING  
CAPS FOR YOU!

**APPLICATORS • DAUBERS**  
**WICKS • BRUSHES**  
All Attached to Caps.

For applying—Shoe Polish, Rubber Cement, Mucilage, Glue and many other liquids. Wicks for Air Refreshers and Deodorizers.

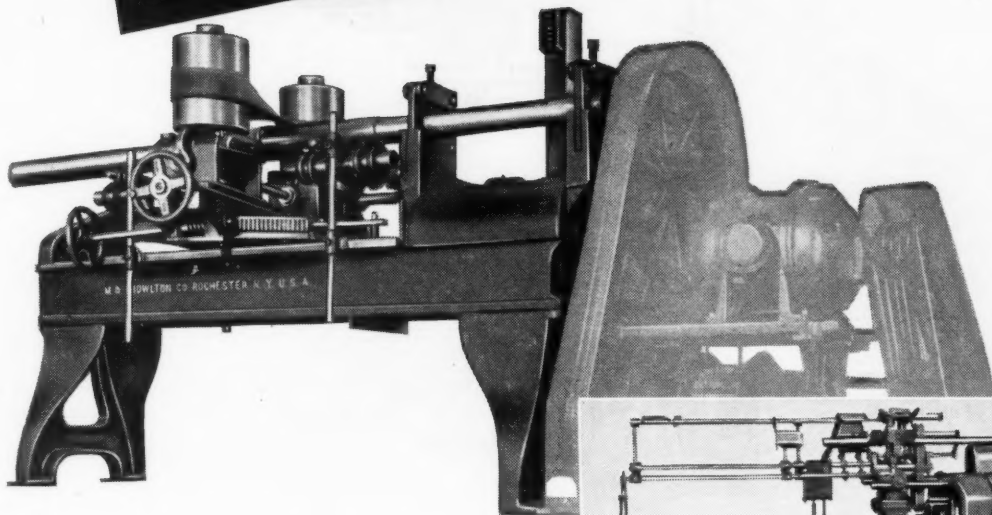
Write us to-day... your inquiries will be given prompt attention.

**The APPLICATOR Company**

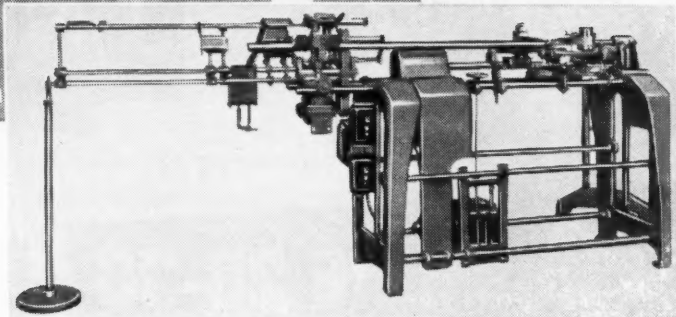
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Brooklyn 10, N. Y.

# TUBE DESIGNED CONTAINERS ★



## HAVE HIGHER MARKETING AND SHIPPING VALUE



Many containers that have served their time as well as purpose are yielding to highly adaptable spiral wound tube designs. This is especially true of containers that must be water, odor and vermin resistant, besides being strong, accurate and "hard-knock" proof. Such coated or impregnated paper containers or tubes ( $\frac{3}{4}$ " to 8" diameters) can be produced at low cost on the Knowlton #77 Spiral Tube Winder, eliminating use of costlier materials and improving the

marketing and shipping value of cylindrical containers.

With the Knowlton #77 Spiral Tube Winder an almost unlimited variety of extremely strong small diameter precision tubes, from  $\frac{1}{4}$ " to 1" are produced for manufacturers of electrical apparatus, cosmetics, medical, surgical and hygienic supplies. Production records show that the versatility and economy of this winding machine is unmatched by any other on the market.

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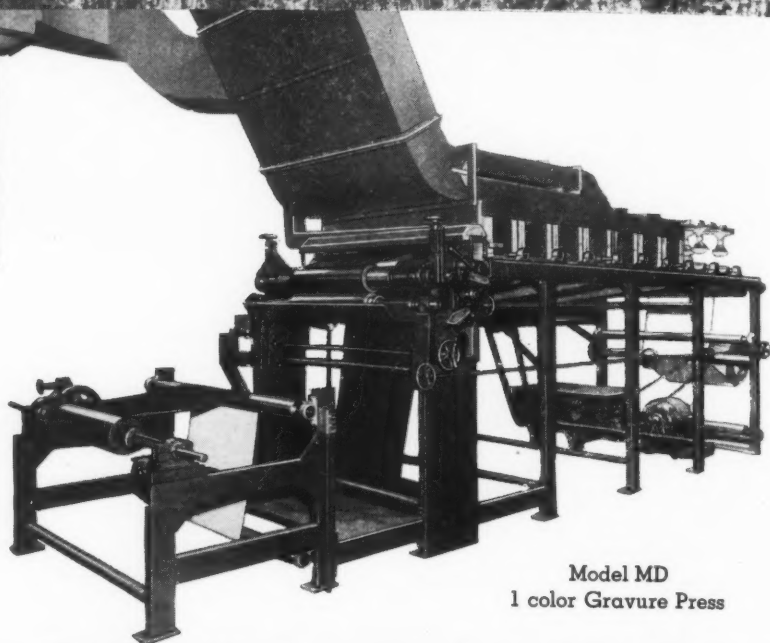
ROCHESTER, NEW YORK

## Early Deliveries

The press illustrated was delivered in 3 months! 1947 delivery is assured on all UNICRAFTS equipment ordered prior to May.

The UNICRAFTS Line includes many other models of Gravure Printing Units, Laminating, Embossing and Coating Equipment, "Rollcraft" Friction and Super Calenders, Positive Register Rubber Printing Plates and other specially designed equipment.

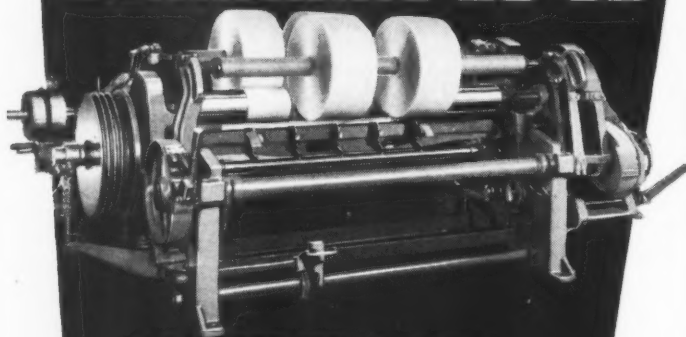
Write us your specific requirements . . . Bulletin furnished on request.



Model MD  
1 color Gravure Press

**UNICRAFTS INC.**  
AMHERST MASSACHUSETTS

## CAMACHINE 28-3D



ACCURATE STRIP WIDTH  
POSITIVE ROLL SEPARATION  
UNIFORM ROLL TENSION

A fast, versatile slitter-winder for all types of coated or tacky papers and fabrics used in packaging.

WRITE FOR FOLDER

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## Finishing Can MAKE A Package

*Finishing*—the final touches—can make or break your package. We specialize in every type of finishing operation — varnishing, lacquering, gumming, die-cutting, embossing, punching, straight cutting, paraffining — and offer our special process: LUSTRALITING.

**JOHN W. CRAWFORD CO.**

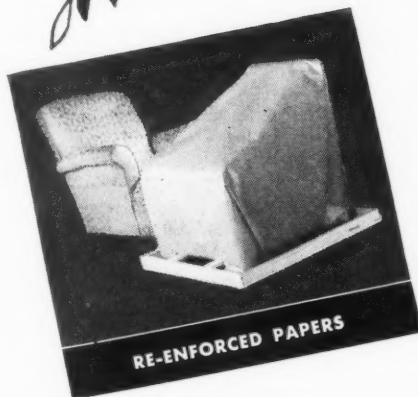
Est. 1859

160 VARICK STREET, NEW YORK, N. Y.  
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## PORTRAIT OF OUR **THILCO** FAMILY TREE



THERE'S no need to look further . . . If your products demand packaging papers for specific protective functions, your best single source of supply is Thilmany. Produced from tree to finished product within our own mills and resources, the Thilco line of papers provides a wide-range packaging service, custom designed to meet individual product requirements. This is important because it means savings in production and selling costs to you — better paper quality and consistency — and better packaging satisfaction all around. We invite your inquiry. Whatever your problem, our staff of technical paper engineers will be glad to demonstrate our ability to solve it.

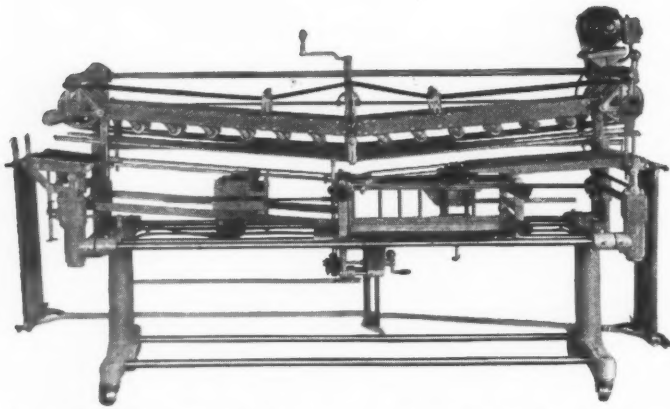


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Built For the Paint and Oil Industries

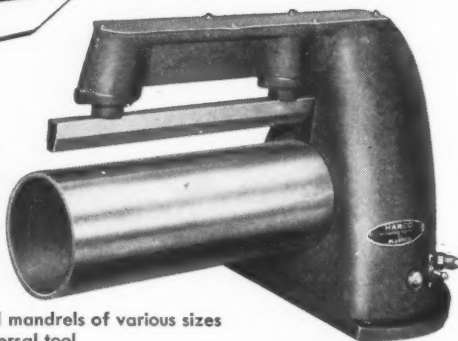
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IN LABELING  
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COMPANY OF PENNSYLVANIA  
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**FABRICATING  
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Heated—Pneu-  
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instrument for  
forming thermo-  
plastic cylinders  
with crystal-clear  
seams.



Quickly changed mandrels of various sizes  
make this a universal tool.

PNU-CYL MANDREL

Whatever your problem with thermoplastic materials  
**HARCO** can be of assistance thru special equipment  
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INDUSTRIES, INC.

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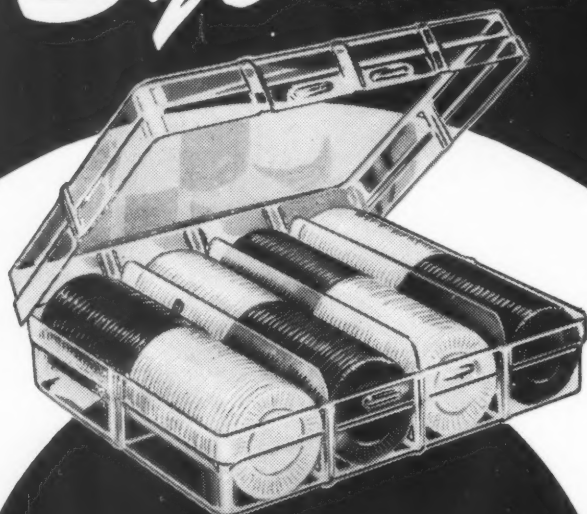
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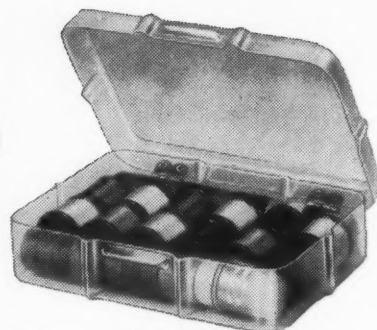
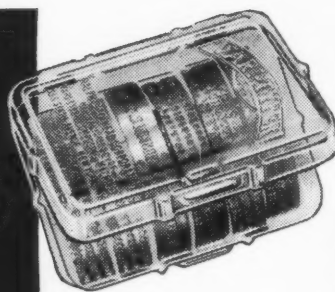


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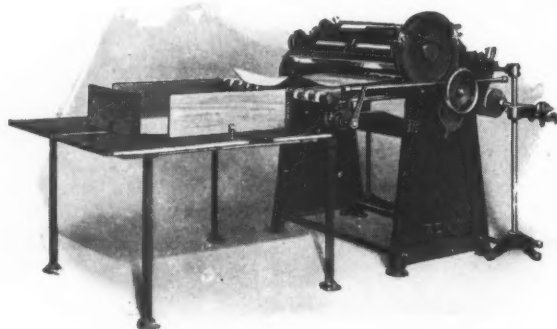
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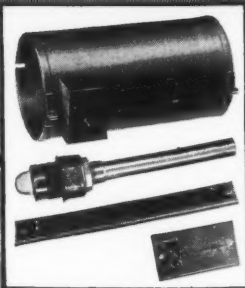
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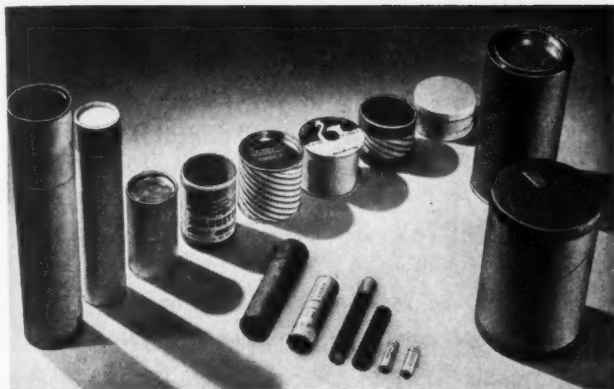
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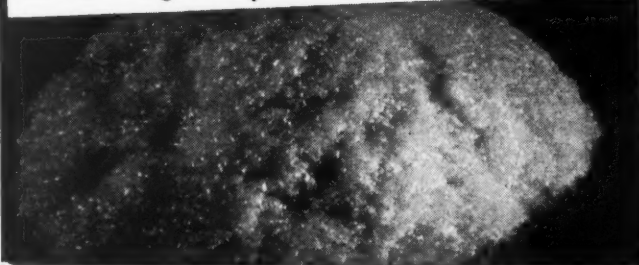
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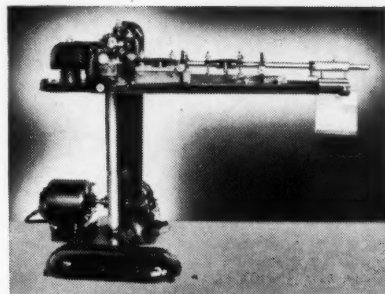
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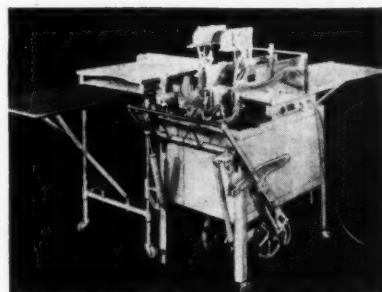
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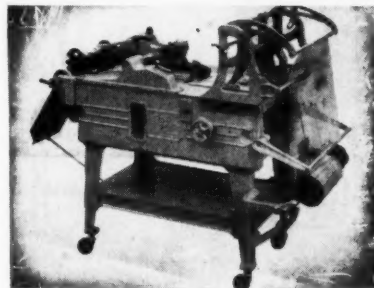
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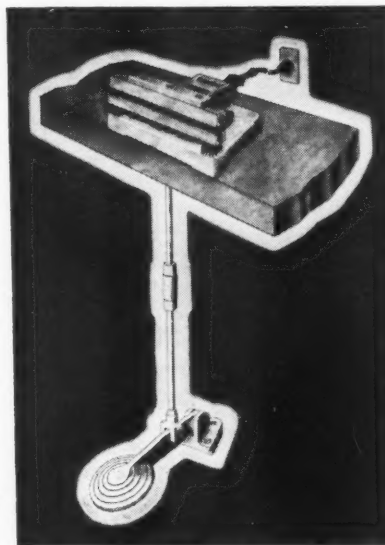
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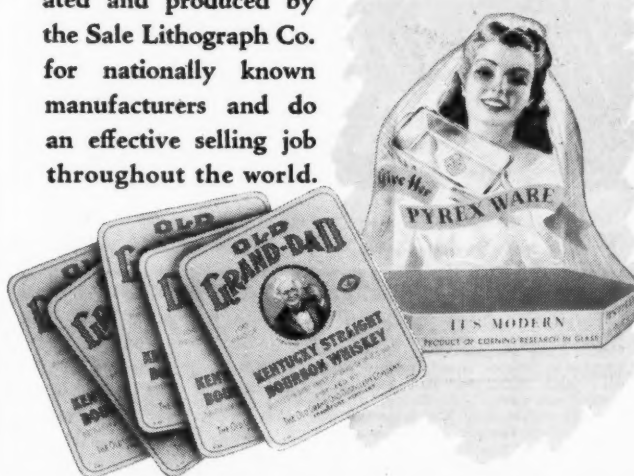


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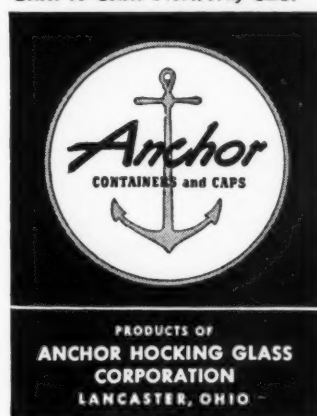
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AH-N Caps are supplied nested which keeps caps clean until applied; protects coatings from damage in handling; speeds up application; and permits use of smaller space saving cartons. AH-N Caps can be quickly and easily removed with a lift type opener, the back of a knife or the handle of a fork or spoon. Because of this convenience housewives everywhere like to buy glass-packed foods sealed with these caps.

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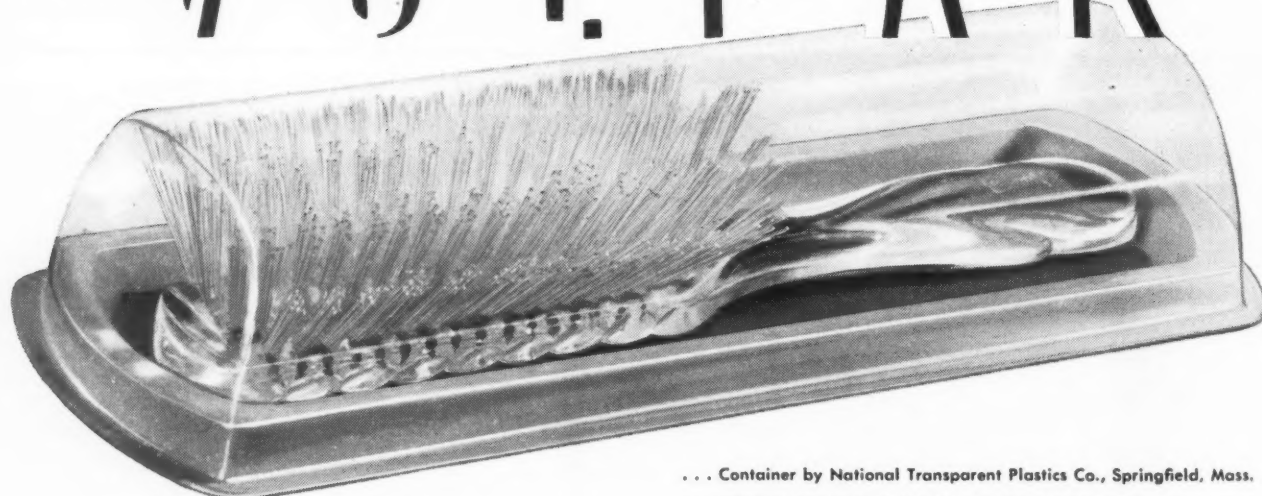
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